1044b UIC - EAST POPLAR OIL FIELD ENFORCEMENT CASE SDWA 1431 Folder ID: 13625 1967 Privileged

Release in

East Poplar Oil Field

Region 8

HUBER NO. 4A

#### HUBER NO. 4

#### SUPPLEMENT TO WELL HISTORY

Formation: B-1 Perfs 5606'-5613'

Tubing Size: 2-7/8" 8rd., J-55

Tubing Depth: 5608'

Packer: Baker A-1 Lok-Set retrievable casing packer at 5572'

Casing Size: 5½" 15.5#

Acid: 1000 gallons Dowell 15% RA-5 with 8 gallons A-9 inhibitor,

and 2 gallons W-35 non-emulsion.

June 15, 1968

Rig up North West rig, unseat pump and pulled rods and pump. Hook up Dowell lines. Pressure test lines. Start pumping 1000 gallons RA-5 acid down tubing. Acid on formation. in at 350# pressure, flow rate 2.75 bbls per minute. Getting blow on annulus. Hooked up and pumped formation water in casing until full and pressured to 300 lbs and shut in. Took 48 bbls to fill. Tubing on vaccum. Start pump using formation water. Took 8 bbls to catch up. 16 bbls in 200# pressure. 20 bbls in with flow rate 1.5 bbls per minute at 500#. 24 bbls in with flow rate .75 bbls per minute at 675#. 25 bbls in with flow rate .75bbls per minute at 675# over flush 1 bbl. Immediate shut in pressure 500#. Tubing pressure at 0 in 3 minutes. Released Dowell and broke out lines. Rigged up and ran pump Hung well on beam and let set until noon to give and rods. acid time to retard. Start unit and well pumped up. Pressured to 400# and held. Released rig.

#### SUMMARY AND CONCLUSIONS

The Huber No. 4A well was drilled as a replacement well for the Huber No. 4 that was temporarily jurked and abandoned when the casing collapsed and diligent efforts to repair the well failed.

The actual drilling of the Huber 4A was relatively routine, hence little discussion is needed. It should be noted that circulation was lost during the drilling of the surface hole resulting in a higher than anticipated overall mud bill.

Some difficulty was encountered during that production casing cementing operation. When the casing was raised to scratch with the reciprocating scratchers the string stuck 10 feet off bottom. Reasonable efforts to get the casing back to bottom failed and the casing was cemented in its position 10 ft. off bottom. Full circulation was maintained throughout the cementing operation.

A Halco float shoe with self fill attachment was run along with centralizers and scratchers as noted previously. When the plug was bumped the float failed; whether this was caused in some manner by the self fill attachment is not known. When the float failed it was decided to shut the well in with 500 psi pressure and

plans made to release the pressure gradually over an eight hour period to prevent occurrence of a microannulus that might result from releasing all of the pressure after the cement had set. This procedure could not be followed when the cementing head started leaking badly. All efforts to stop this leak failed and the only alternative was to rig up the pump truck and keep pressure on the plug until all back flow stopped. In spite of everything, subsequent treating of the B-1 zone in the well indicated that a good cement job was accomplished. The cementing equipment was washed up on top of the plug theorizing that it might make the drilling of the plug easier.

It had been predetermined that the "C" zones should be drilled in with the completion rig. The reasoning behind this decision was:

- 1. To avoid the necessity of overcoming possible lost circulation with the rotary over the hole.
- 2. Eliminate formation damage and possibly save acid treatment expense.
- 3. Well might flow natural.

The "C" zones were drilled with the completion rig using the 2 7/8" tubing as the drill string and 4 1/4" Varnell roller bit, 2 - 3 1/2" drill collars were rented. In view of the bitter cold

weather it was decided that lease crude should be used as the drilling fluid. The cement on top of the plug and the plugs themselves were drilled out with remarkable ease. It can be speculated that the combination of putting some cement on top of the plugs along with the crude oil and high BHT made this possible.

The formation was drilled using 6,000 lbs. of bit weight and 75 RPMs. Drilling progress was considered to be adequate and a careful inspection of the tubing indicated that no damage had been done to any of the tubing, threads or collars. Due primarily to the small single watercourse in the bit it seemed prudent to drill by circulating "the long way" rather than use reverse condition. It is believed that this decision was born out when relatively large pieces of rubber and metal from the plugs and float respectively were observed in the returns. These would have had to have been much smaller to have come through the bit.

The "C" zone was drilled and results were disappointing in that the zone would not flow. Subsequent acid treatment suggests a low volume well.

It is believed that any production will be relatively short lived due to the low permeability of the reservoir and the small amount of acid that was used, and that additional stimulation at a later date will be required to maintain a reasonable production rate.

It is felt that the "C" zone under its present conditions can be produced with the "B" zone.

The "B" zone was perforated, treated and tested as per previous comments and the treatment report, without incident.

Due to the proximity of the well to the Huber No. 4 and in the interests of economy, no open hole logs were run.

During the drilling of the well, interesting shows were noted during sample inspection in the Heath and Kibbey formations. The following sample log through the Heath and Kibbey, corrected to log depth, is worthy of study.

The acoustic cement Bond Logs were run for the purpose of showing the cement top. The log was run twice with different calibrations. Both logs were generally unacceptable and should not be considered reliable, however, a close study of the logs enables a cement top to be picked at 4,357 with a fair degree of confidence.

Hecher 4-A

December 15, 1969

Mr. J. R. Hug, Supervisor Oil & Gas Conservation Commission 15 Poly Drive Billings, Montana

Dear Mr. Hug:

Attached are Sundry Notices covering recent work on the Huber No. 1 and No. 4-A wells, East Poplar Field.

Permission had been received from the Commission to install two zone pumps in both of these wells. The Heath zone in the Huber No. 4-A well produced water with a trace of oil when it was perforated and acidized and this well was placed back on production from the Charles. After treating the Heath in Huber No. I well with Halliburton's MY-T-FRAC, total production from the Charles and Heath would be too great for two zone pumping. We are therefore postponing the installation of the two zone pump in this well until the Heath production declines to the point where such installation would be practical.

Very truly yours,

THE POLUMBUS CORPORATION

D. J. Low

DJL:jmf

Enclosures

A.F.E.	No	50421
Object	Code	232910

### MURPHY EXPLORATION & PRODUCTION COMPANY AUTHORITY FOR EXPENDITURE HUBER 4A NW NE Section 10, T28N, R51E ROOSEVELT COUNTY, MONTANA

#### PROPOSAL AND JUSTIFICATION:

This well is pumping drilling mud and a casing leak is suspected. It is proposed to find the leak and cement squeeze.

#### ESTIMATED COSTS

Rig	\$	6,000
Cement		3,200
Tools		3,000
Roustabout		1,000
Trucking		1,500
Supervision & Miscellaneous		1,300
TOTAL ESITMATED COST	\$ 1	16,000

#### APPORTIONMENT OF TOTAL ESTIMATED COST

Murphy Exploration & Production Co. 100.00% \$16,000

APPROVAL OF EXPENDITURE

Requested by:

Approved by:

Date Sidney W.

RR/jh August 25, 1995

DATE JOB COMPLETED

APPROXIMATE COST

Form No. 2 GENERAL RULES 201, 202, 213, 216, 219, 233.1

#### (SUBMIT IN QUADRUPLICATE)

TO

N O T I C E!
THIS FORM BECOMES A
PERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION.

## OIL AND GAS CONSERVATION COMMISSION OF THE STATE OF MONTANA BILLINGS OR SHELBY

#### SUNDRY NOTICES, AND REPORT OF WELLS

Notice of Intention to Drill	<u> </u>	Subsequent Report of Water Shut-off
Notice of Intention to Change Plans		Subsequent Report of Shooting, Acidizing, Cementing
Notice of Intention to Test Water Shut-off		Subsequent Report of Altering Casing
Notice of Intention to Redrill or Repair Well	X	Subsequent Report of Redrilling or Repair
Notice of Intention to Shoot, Acidize, or Cement		Subsequent Report of Abandonment
Notice of Intention to Pull or Alter Casing		Supplementary Well History
Notice of Intention to Abandon Well		Report of Fracturing

Notice of intention to Pull of Alter C	asing	Supple	mentary Well History		I
Notice of Intention to Abandon Well		Repor	of Fracturing		
(Indicate	Above by Check Mar	k Nature of F	leport, Notice, or Othe	•	
			***************************************	December 6	
Following is a { notice of intention to creport of work done	lo work } on lane	d leased	described as foll	ows:	
•			LEASE	Ruber	***************************************
MONTANA		Roosevel	<b>t</b>	Enst	Poplar
(State)	•••••••••••••••••••••••••••••••••••••••	(County		• • • • • • • • • • • • • • • • • • •	ield)
Well No4-4	Section	10	T 28 N	R 51 E	
•	(m. sec.)		(Township)		(Meridian)
The well is located ft.	from { N	line and	1905 ft. f	rom{ E }lir	ne of Sec. 10
(Locate accurately on Plat on back of the	s form the well locati	on, and show	lease boundary.)	a see a side y y	المنافع
The elevation of the derrick floor abo	ive the sea level is	2091	KB h	SECULIA	
· ·	'			······	
READ CAREFULLY	<b>DETAILS</b>	OF PLAN (	OF WORK	DEC 7-RE	AD CAREFULLY
(State names of and expected depths to o	bjective sands; show s	size, weights, a	and lengths of proposed	i casings; indicate mud	ding jobs, cementing
points, and all other important proposed wor	K, particularly all det	alls results Sh		c <b>turi</b> ngde oo oo Mark strate op ialintan	
	DETA	LILS OF WORLS			
8et 8-5/8" 3. Drlg. 7-7/	apsed casing -65 hole to appr surface pipe 8" hole to 5" sing at appr	at 4161 rox 500' 9 cement 700' 9x. 5700	ed to surface ' w/approx 50		•
CORES AND CUTTINGS TO BE	DELIVERED TO COM	MISSIOÑ			
FIELD OFFICE IN ACCORDANG Approved subject to conditions on reverse		Co	mpany E. A.	Columbus, Jr.	······
DateDEC81965		Ву	E. A G.	linker /	
By J. R. Hug, Supervisor	Title		le. Owner		
District Office Ag			dress. 414 Pa	tterson Build	ing
NOTE:-Reports on this Form to be submitted	to the District Agent	for Approval	in Quadruplicate.	, ******	

Form No. 2 GENERAL RULES 201, 202, 213, 216, 219, 233.1

#### (SUBMIT IN QUADRUPLICATE)

TO

N O T I C B!
THIS FORM BECOMES A
PERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION.

## OIL AND GAS CONSERVATION COMMISSION OF THE STATE OF MONTANA BILLINGS OR SHELBY

### SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill	Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans	Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off	Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well	Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement	Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing	Supplementary Well History	X
Notice of Intention to Abandon Well	Report of Fracturing	

February 7, on land described as follows: report of work done East Poplar Roosevelt .....MONTANA (County) (Field) (m. sec ) (Township) (Range) (Meridian) line and 1,905 ft. from E line of Sec. 10 (Locate accurately on Plat on back of this form the well location, and show lease boundary.) READ CAREFULLY DETAILS OF PLAN OF WORK READ CAREFULLY (State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing,)

### DETAILS OF WORK

#### Spud 12/11/65

Drilled 12 1/4" hole to 920 ft. Set new 8 5/8" J-55 24# at 911' KB cemented w/325 sx. cement circ. WOC 12 hrs., pressure tested surf. csg. to 500 psi, pressure test okay Drilled 7 7/8" hole to 5, 760, set new 5 1/2" J-55, 15.5# csg. @ 5, 750 KB cemented w/175 sx. Rotary off, 12/23/65 completion rig on 12/31/65

Pressure tested production casing to 1,500 psi, pressure test okay
Drilled 4 1/4" hole to 5,795 ft. acidized open hole w/500 gal. 15% RA. Swab test C Zone
at 20 bbls. per day 90% oil. Set Model D w/plug at 5,736. Perf B-1 5,606-5,613 w/4 jets
per ft. acidized perfs w/250 gal. 15% XFM. Swab test B-1 100 bbls. per day 40% oil.
POP for production test of B-1 Zone, 1/11/66.

Approved subject to conditions on reverse of form	Company E. A. Polumbus, Jr.			
Date	By E. C. Bambalt			
Ву	Title Engineer			
Title District Office Agent	Address. 414 Patterson Bidg., Denver, Colo.			

NOTE:-Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.



Form No. 2 GENERAL RULES 201, 202, 213, 216, 219, 233,1

#### (SUBMIT IN QUADRUPLICATE) .

TO

# N O T I C E! THIS FORM BECOMES A PERMIT WHEN STAMPED APPROVED BY AN AGENT OF THE COMMISSION.

## OIL AND GAS CONSERVATION COMMISSION OF THE STATE OF MONTANA BILLINGS OR SHELBY

#### SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill	Subsequent Report of Water Shut-off				
Notice of Intention to Change Plans	Subsequent Report of Shooting, Acidizing, Cementing				
Notice of Intention to Test Water Shut-off	Subsequent Report of Altering Casing				
Notice of Intention to Redrill or Repair Well	Subsequent Report of Redrilling or Repair				
Notice of Intention to Shoot, Acidize, or Cement	Subsequent Report of Abandonment				
Notice of Intention to Pull or Alter Casing	Supplementary Well History	x			
Notice of Intention to Abandon Well	Report of Fracturing				

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data) February 21. 19 66 notice of intention to do work report of work done owned on land described as follows: leased LEASE Huber MONTANA Rocsevelt East Poplar (Field) (County) 51E (Meridian) Well No. 4.A 10 28N (m. sec.) (Township) The well is located 660 ft. from line and 1.905 ft. from  $\left\{\begin{array}{c} E \\ W \end{array}\right\}$  line of Sec. 10 (Locate accurately on Plat on back of this form the well location, and show lease boundary.) READ CAREFULLY DETAILS OF PLAN OF WORK READ CAREFULLY (State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, comenting points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.) DETAILS OF WORK RESULT B-1 Zone production test indicated daily production of 95 bbls. fluid, 40% oil. Lowered tubing, pushed out plug in Model "D" set at 5,736. Pump tested B & C Zones together, daily production is 41 bbl. oil, 52 bbls. water. RECEIVE Well completed. Producing from B-1 and C-3 Zones. FFB 24 1960 Cil. AliD tina ou ... OF THE STATE OF MONTANA . BILLING Approved subject to conditions on reverse of form FEB 2 4 1966 ORIGINAL SIGNED BY: Engineer By.....J; R: Hug; Supervisor Title Address 414 Patterson Building, Denver, Colo. District Office Agent

NOTE:-Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

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#### (SUBMIT IN QUADRUPLICATE) **TO**

FORM BECOMES PERMIT WHEN STAMPED APPROVED BY AN AGENT OF THE COMMISSION.

458 10 OIL AND GAS CONSERVATION COMMIS OF THE STATE OF MONTANA STATE OF MOUNT **BILLINGS OR SHELBY** 

SUNDRY NOTICES AND REPORT OF

CATE UP CO.		
Subsequent Report of Water Shut-off		
Subsequent Report of Shooting, Acidizing, Cementing	<u> </u>	
Subsequent Report of Altering Casing	1	
Subsequent Report of Redrilling or Repair		
Subsequent Report of Abandonment	٠.	
Supplementary Well History		
Report of Fracturing		
	Subsequent Report of Water Shut-off Subsequent Report of Shooting, Acidizing, Cementing Subsequent Report of Altering Casing Subsequent Report of Redrilling or Repair Subsequent Report of Abandonment Supplementary Well History Report of Fracturing	

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

	•••	November 13,	1969
Following is a protice of intention to provide the port of work done	o do work on land leased	described as follows:  LEASE Huber	
MONTANA ROC	sevelt	East Poplar	
(State)	(County)		(Field)
Well No. 4-A NW NE Section	on 10, T. 28 N R. 51	E.	6th P. M.
**		Township) (Range)	(Meridian)
The well is locatedft.	from $\begin{cases} N \\ S \end{cases}$ line and 1905	ft. from $\left\{\begin{array}{cc} E \\ W \end{array}\right\}$ line of $S$	Sec10
LOCATE ACCURATELY ON PLAT (	ON BACK OF THIS FORM THE W	VELL LOCATION, AND SHO	W LEASE BOUNDARY
The elevation of the derrick floor abo			
DEAD CARRILLY	DETAILS OF DLAN OF	WORK	DEAD CADEBULLA

READ CAREFULLY

#### DETAILS OF PLAN OF WORK

READ CAREFULLY

١:

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing,)

## DETAILS OF WORK

- i. Pull rods, pump, packer and tubing.
- 2. Set retrievable bridge plug at 5000'
- 3. Perforate 5-1/2" casing in Heath from 4870-4880' with 2 jets per foot.
- Test zone and sand-water frac, if necessary.
- 5. Assuming some is commercially productive from Heath, retrieve bridge plug and set production packer at 5575'.
- 6. Run two sone pump and cross-over assembly, produce Charles through annulus and Heath through tubing. Place well on production.

Approved subject to conditions on reverse of form	Company The Polumbus Corporation
NOV 2 1 1989	By & J. Low
Date ORIGINAL SIGNED BY: By J. R. Hug, Supervisor	Title Vice President - Exploitation
Title  District Office Agent	Address 220 C. A. Johnson Building Denver, Colorado 80202

NOTE:-Reports on this form to be submitted to the District Agent for Approval in Quadruplicate.

(SUBMIT IN QUADRUPLICATE

OIL AND GAS CONSERVATION COMMISSIONS OF THE STATE OF MONTANA

NOTICE THIS FORM BECOMES A FERMIT WHEN STAMPED SEPROVED BY AN AGENT OF THE COMMISSION. ...

BILLINGS OR SHELBY

SUNDRY NOTICES AND REPORT DESWELL

Notice of Intention to Drill	Subsequent Report of Water Shut-off	1
Notice of Intention to Change Plans	Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off	Subsequent Report of Altering Casing	1.
Notice of Intention to Redrill or Repair Well	Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement	Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing	Supplementary Well History	
Notice of Intention to Abandon Well	Report of Fracturing	
	Report of Recompletion Attempt	×

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

	Decembe	r 15,	1969
Following is a notice of intention to do work on land		ollows:	
MONTANA Roosevelt		East Poplar	•
(State)	(County)		(Field)
Well No. 4-A NW NE Section 10	T28N	P51E (Range)	6th P. M.
The well is located 600 ft. from \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			(Meridian)
LOCATE ACCURATELY ON PLAT ON BACK OF THIS FO	RM THE WELL LOCATIO	N, AND SHOW I	EASE BOUNDARY
The elevation of the derrick floor above the sea level is	2091 K. B.		

#### READ CAREFULLY

#### DETAILS OF PLAN OF WORK

READ CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing,)

### DETAILS OF WORK

- Pulled rods, pump, tubing and set retrievable bridge plug at 4994'. (11-17-69)
- Perforated Heath zone from 4870-80' with 2 jets per foot, ran tubing and swabbed 2. well dry.
- Pulled tubing, ran back with RTTS packer, set at 4852'. Acidized Heath perforations with 500 gallons MCA-15%. Maximum pressure 1475 psi (11-20-69).
- Swabbed Heath water at 10 barrels per hour. Hole filled with water overnight. swabbed well down, recovering only a trace of oil. (11-21-69).
- 5. Pulled packer and bridge plug, ran back with Lok-set packer at 55831 and placed well back on production from Charles B-1 zone. (11-23-69)
- 6. Heath perforations are being retained for possible later work on this zone.

Approved subject to conditions on reverse of form  BEC 1 9 1959  Date ORIGINAL SIGNED BY:	By V. Low
ByB, R. Hug, Supervisor	Title Vice President - Exploitation
Title District Office Agent	Address 220 C. A. Johnson Building
	Denver, Colorado 80202

NOTE:-Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

Ruf 44

1969

(SUBMIT IN QUADRUPLICATE)

TO

OIL AND GAS CONSERVATION COMMISSION

BILLINGS OR SHELBY

SUNDRY NOTICES AND REPORT OF WELLS

THIS FORM BECOMES A
BERMIT WHEN STAMPED
APPROVED BY AN AGENT
OF THE COMMISSION.

Notice of Intention to Drill	Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans	Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off	Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well	Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement	Subsequent Report of Abandonment	م
Notice of Intention to Pull or Alter Casing	Supplementary Well History	
Notice of Intention to Abandon Well	Report of Fracturing	
	Report of Recompletion Attempt	×

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data)

December 15,

		***************************************		,
Following is a Inotice report	of work done	described as LEASE	follows:	
MONT	ANA Roosevelt		East Poplar	
(St	ate)	(County)		(Field)
Well No. 4-A	NW NE Section 10	T28N	R51E	6th P. M.
•	(m. sec.)	.(Township)	(Range)	(Meridian)
The well is located	6.0.0 ft. from } } line and	1905 ft. from	line of Sec	10
LOCATE ACCURATEL	Y ON PLAT ON BACK OF THIS FO	ORM THE WELL LOCATION	ON, AND SHOW L	EASE BOUNDARY
The elevation of the de	errick floor above the sea level is	2091 K. B.	•••••	
READ CAREFULLY	DETAILS OF	PLAN OF WORK	R	EAD CAREFULLY

(State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

## DETAILS OF WORK RESULT

- 1. Pulled rods, pump, tubing and set retrievable bridge plug at 4994'. (11-17-69)
- 2. Perforated Heath zone from 4870-80' with 2 jets per foot, ran tubing and swabbed well dry.
- 3. Pulled tubing, ran back with RTTS packer, set at 4852'. Acidized Heath perforations with 500 gallons MCA-15%. Maximum pressure 1475 psi (11-20-69).
- Swabbed Heath water at 10 barrels per hour. Hole filled with water overnight, swabbed well down, recovering only a trace of oil. (11-21-69).
- 5. Pulled packer and bridge plug, ran back with Lok-set packer at 5583' and placed well back on production from Charles B-1 zone. (11-23-69)
- 6. Heath perforations are being retained for possible later work on this zone.

Approved subject to conditions on reverse of form  DEC 1 9 1969  DateORIGINAL SIGNED BY:	Company THE POLUMBUS CORPORATION  By Low
By. Hug, Supervisor	Title Vice President - Exploitation
Title  District Office Agent	Address 220 C. A. Johnson Building
	Denver. Colorado 80202

NOTE:-Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

WHEN USED AS PERMIT TO DRILL, THIS EXPIRES 90 DAYS FROM DATE OF APPROVAL

LES

Form No. 2 GENERAL RULES 201, 202, 213, 216, 219, 233.1

#### · (SUBMIT IN QUADRUPLICATE) \*

TO

NOTICE!
THIS FORM BECOMES A PERMIT WHEN STAMPED APPROVED BY AN AGENT OF THE COMMISSION.

# OIL AND GAS CONSERVATION COMMISSION OF THE STATE OF MONTANA BILLINGS OR SHELBY

#### SUNDRY NOTICES AND REPORT OF WELLS

	······································	<u> </u>		
Notice of Intention to Drill	Subsequent Report of Wate	r Shut-off		
Notice of Intention to Change Plans	Subsequent Report of Shoot	Subsequent Report of Shooting, Acidizing, Cementing		
Notice of Intention to Test Water Shut-off	Subsequent Report of Alter	Subsequent Report of Altering Casing		
Notice of Intention to Redrill or Repair Well	Subsequent Report of Redr	Subsequent Report of Redrilling or Repair		
Notice of Intention to Shoot, Acidize, or Cement	Subsequent Report of Aban	Subsequent Report of Abandonment		
Notice of Intention to Pull or Alter Casing	Supplementary Well History	Supplementary Well History		
Notice of Intention to Abandon Well	Report of Fracturing			
" " " Perf. AdditionZone	Y			
· · · · · · · · · · · · · · · · · · ·	Mark Nature of Report, Notice, or Oth	er Data)		
	Ser	otember 16, 1971		
Following is a {notice of intention to do work } on l	and { owned   described as fol	·		
N CONTRANTA	Paggaralt	r Pomles		
MONTANA (State)	(County)	Fig. FOOLat. (Field)		
White Soction	10 28M	איני איני איני איני איני איני איני איני		
Well No. 4-A NW NE Section (m. sec.)	(Township)	(Range) (Meridian)		
The well is located	line and 1905 ft.	from { E }line of Sec10		
(Locate accurately on Plat on back of this form the well lo				
The elevation of the derrick floor above the sea level	is2091 KB			
		•••••		
	S OF PLAN OF WORK	READ CAREFULLY		
(State names of and expected depths to objective sands; sho points, and all other important proposed work, particularly all	w size, weights, and lengths of propose details results Shooting, Acidizing, Fra	ed casings; indicate mudding jobs, cementing acturing.)		
DE	TAILS OF WORK RESULT			
. This wall is prosently produ		3		
This well is presently production test 9/4/71 shorperforate upper part of Charles B do not show excessive water, we will be set a B-2 zones will be produced together.	wed 20 BOPD and 84 E -2 zone from 5626' t ill acidize the B-2 bove the B-1 perfora	BWPD. We propose to to 5628'. If swab tests perforations with 250		
•				
Approved subject to conditions on reverse of form	CompanyThe Po	lumbus Corporation		
Date SEP 2 1 1200	$\mathcal{A}$	~ · · · · · ·		
ONGINAL SIGNED BOT	ву			
By J. R. Hug. Sugarison	TitleVice-P	resident		
Title	1000 0	onital Tipe Desire		
District Office Agent		apitol Life Building		

NOTE:-Reports on this Form to be submitted to the District Agent for Approval in Quadruplicate.

Form No. 2 GENERAL RULES 201, 202, 213, 216, 219, 233,1

2 5

STATE

COUNTY

WELL

(SUBMIT IN QUADRUPLICAT

 $\mathbb{F}_{\Phi_{k}}$ 

TO

OIL AND GAS CONSERVATION COMMISSION ED.

OF THE STATE OF MONTANATE OF COMMISSION COMMISS

NOTICE
THIS FORM BECOMES A
HERMIT WHEN STAMPED
PPROVED BY AN AGENT
OF THE COMMISSION.

CHESTO 3 REPORTER PRIG. & SUPPLY CO.

SUNDRY NOTICES AND REPORT OF WELLS

Notice of Intention to Drill	Subsequent Report of Water Shut-off
Notice of Intention to Change Plans	Subsequent Report of Shooting, Acidizing, Cementing
Notice of Intention to Test Water Shut-off	Subsequent Report of Altering Casing
Notice of Intention to Redrill or Repair Well	Subsequent Report of Redrilling or Repair
Notice of Intention to Shoot, Acidize, or Cement	Subsequent Report of Abandonment
Notice of Intention to Pull or Alter Casing	Supplementary Well History
Notice of Intention to Abandon Well	Report of Fracturing
	Subso Rept of Perf Additional y
(Indicate Above by Check Mar	rk Nature of Report, Notice, or Other Data) Zone

			Subso.Rept.of P	erf Addition	ıal y
	(Indicat	e Above by Check Mark Nati		ecember 7,	ne
Pallauring in	. Inotice of intention	to do work ( on land )			
onowing is	lreport of work do	to do work on land }		Huber	
		Roos			
	(State)		(County)	(1	Field)
Well No	4 – A	NW NE Sec.10	28N	51E	M.P.M.
		ft. from $\begin{cases} \frac{N}{m} \end{cases}$ line and			
		ON BACK OF THIS FOR			
		bove the sea level is2			
READ CARE	FULLY	DETAILS OF P	LAN OF WORK	7.9	AD CAREFULLY
(State name ementing point	es of and expected depths	s to objective sands; show siz proposed work, particularly a	e. weights and lengths of	proposed casings: ind	
	•	DETAILS RES	OF WORK ULT	•	
3/23/71	Perforated up	oper part of Char	rles B-2 zone f	rom 5626⅓-27	5 W/
3/24/71	4-50 gr. chai	rges. Set packer perfs w/250 gal	r at 5620' and :	swabbed well	dry.
	Reacidized w/	/750 gal 15% HCI	, swabbed acid w	water.	
7/25/71	Had 1200' of	fluid in tbg. atc., but low rate.	fter being shut	in overnigh	t. Swabbed
726/71-			1		,
1/27/71	Put on pump i	for test. Water	productive at	low rate.	
/28/71	Moved packer	to 5590' (above	B-1 zone) and p	out back on	pump.
.0/12/71	24 Hr. test 2	20 BO + 100 BWPD			
approved sub	oject to conditions on	reverse of form	Company THE POI	LUMBUS CORPO	RATION
)ate	DEC 1 0 1974	•	By D Lac	<u>~</u> .	·
y <mark>Judso</mark> r	District Office Agent	BINGUE	Title Vice Pr	resident	•••••
<u>.</u>	Jistifet Office Tigent	11116	Address 1000 Cap	aitol Life C	enter
	ON USE ONLY	<u> </u>	Denver,	Colorado 80	203
AP! WE	LL NUMBER	NOTE:—Reports on this	form to be submitted to the	District Agent for A	pproval in Quadruplica:
	, , , , , , , , , , , , , , , , , , , ,	WHEN USED AS PERM	IIT TO DRILL, THIS EXPIRI	ES 90 DAYS FROM DA	TE OF APPROVAL.

OVER

### (SUBMIT IN QUADRUPLICATE)

TO

OIL AND GAS CONSERVATION COMMISSION VED

OF THE STATE OF MONTHNA STATE OF

NOTICE
THIS FORM BECOMES A
FRMIT WHEN STAMPED
PROVED BY AN AGENT
PITHE COMMISSION.

Notice of Intention to Drill	Subsequent Report of Water Shut-off	
Notice of Intention to Change Plans	Subsequent Report of Shooting, Acidizing, Cementing	
Notice of Intention to Test Water Shut-off	Subsequent Report of Altering Casing	
Notice of Intention to Redrill or Repair Well	Subsequent Report of Redrilling or Repair	
Notice of Intention to Shoot, Acidize, or Cement	Subsequent Report of Abandonment	
Notice of Intention to Pull or Alter Casing	Supplementary Well History	
Notice of Intention to Abandon Well	Report of Fracturing .	
Notice of Change of Operator X		

(Indicate Above by Check Mark Nature of Report, Notice, or Other Data) August 8, 1986 Following is a anotice of intention to do work on land described as follows: LEASE HUBER Roosevelt East Poplar .....MONTANA (County) (Field) Principal 51E (Range) (Township) (Meridian) The well is located 660 ft. from Rline and 1905 ft. from line of Sec. 10LOCATE ACCURATELY ON PLAT ON BACK OF THIS FORM THE WELL LOCATION, AND SHOW LEASE BOUNDARY The elevation of the derrick floor above the sea level is.... READ CAREFULLY DETAILS OF PLAN OF WORK READ CAREFULLY (State names of and expected depths to objective sands; show size, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work, particularly all details results Shooting, Acidizing, Fracturing.)

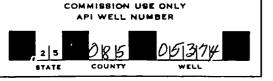
## DETAILS OF WORK RESULT

Notification of sale of above described property, effective 7-1-86, resulting in a change of Operator.

Certified by: GRACE PETROLEUM CORPORATION

Title: Supervisor
Production Accounting

Approved subject to conditions on reverse of form SEP 1 5 1986 Date	Company MURPHY OIL, U.S.A., INC.
DateORIGINAC SIGNED BY:  By Dec :4::feman, Executive Secretary,  District Office Agent Title	Title Manager of Production Department 200 Peach St.  Address El Dorado, AR 71730



NOTE:-Reports on this form to be submitted to the District Agent for Approval in Quadruplicate

Fórm 2

Submit In Quadruplicate To:

ARM 36.22.307, 1003, 1004, 1011,

Montana l	Board of Oil and Gas ( Billings or Shelby Office	Onservation 1013, 1103, 1222, 1301, 1306, and 1309
Sun	dry Notices and Report o	f Wells
Operator Murphy Exploratio	on & Production Company	Lease Name:
	-	Huber No. 4 619202122233
Address P.O. Box 547		Lease Type (Private/Sate/Federal)
		Private & MAR 1995
City Poplar State	MT Zip Code 59255	Well Number: BOARE
Telephone Number ( 406) 768-3612	Telefax Number (406 768-5497	Huber 4A SIAIT
		Huber 4A SIAIL SIAIL STATE OF
Location of well (1/4-1/4 section and footage n	neasurements): NWNE	(8/0CAC)
660' from N line 1905'		
T28n, R51E		East Poplar Unit
If directionally or horizontally drilled, show bo	oth surface and bottom hole locations)	Section, Township, and Range:
API Number:	Well Type (oil, gas, injection, other):	Sec. 10. T28N. R51E
25 0 8 5 0 5 3 7 4	Oil Well	County:
State County Well		Roosevelt
indicate below with an X the nature of this not	ice, report, or other data:	
Notice of Intention to Change Plans	_	ort of Mechanical Integrity Test
Notice of Intention to Run Mechanical Integrit	_	ort of Stimulation or Chemical Treatment
Notice of Intention to Stimulate or to Chemical Notice of Intention to Perforate or to Cement	,	ort of Perforation of Cementing ort of Well Abandonment
Notice of Intention to Abandon Well	= 1	ort of Well Abandonment ort of Pulled or Altered Casing
Notice of Intention to Pull or Alter Casing		ort of Pulling Waste Disposal
Notice of Intention to Change Well Status	<u> </u>	ort of Production Waste Disposal
Supplemental Well History	=	ort of Change in Well Status
Cther (specify) Comingle	_	ort of Gas Analysis (ARM 36.22.1222)
	ŏ	
Describe planned or completed work in detail Indicate the intended starting date for proposed		agrams, analyses, or other information as necessary.
This well is producing rate of 11 BOPD and 7	g from the Madison B-l 3 BWPD with a Lockset P	Zone 5606'-56i3' at the acker set at 5450'.
The Heath Zone 4870'-4 tested. We would like these 2 zones and pump	e to pull the Lockset P	1969 and was never pump acker out and comingle

BOARD	SEONLY
Approved MAR 2 7 1995	
Date	
Original signed by its titles	trans. Opini Ficial Incomput
Name	Tide

The undersigned hereby certifies that the information contained on this application is true and correct:

Raymond Reede, District Manager

Print Name & Title

- 36.22.1004 DUAL COMPLETION OF WELLS (1) No well may be dually completed or dually recompleted without first notifying the board on Form No. 2 and each offset operator in writing at least 10 days prior to the commencement of such completion or recompletion operation, and without approval of the petroleum engineer or his authorized agent obtained after such 10 days. If within such 10 days any offset operator files with the board a written protest to the proposal, the matter shall be immediately set down for hearing after notice, and the well shall not be completed or recompleted until permitted by order of the board after such hearing (History: Sec. 82-11-111, MCA; IMP, Sec. 82-11-123 and Sec. 82-11-124, MCA; Eff. 12/31/72; AMD, 1982 MAR p. 1398, Eff. 7/16/82.)
- 36.22.1208 PRODUCING FROM DIFFERENT POOLS THROUGH THE SAME CASING No well drilled after January 1, 1954, shall be permitted to produce either oil or gas from different pools through the same string of casing without first receiving written permission from the board, which may require at the discretion of the board notice and hearing. (History: Sec. 82-11-111, MCA; IMP, Sec. 82-11-123 and Sec. 82-11-124, MCA; Eff. 12/31/72.)

Form 2 Rev. 8-92

# Submit In Quadruplicate To: Montana Board of Oil and Gas Conservation Billings or Shelby Office

ARM 36.22.307, 1003, 1004, 1011, 1013, 1103, 1222, 1301, 1306, and 1309

Sundry Notices and Report of Wells			
Operator			Lease Name:
Murphy Exploration & Pro	oduction Comp	oany	Huber No. 4-A  Lease Type (Private/State/Federal):
P.O. Box 547  City State Poplar	Zip Code 1t .	59255	Private Well Number:
Telephone Number ( )	Telefax Number (	)	No. 4-A FEB TOTAL Unit Agreement Names
Location of well (1/4-1/4 section and footage m	ट्याकाटाप्र):		SIV.:
660' From N Line and 190 NW NE Section 10, T28N,	R51E		East Poplar 68195
If directionally or horizontally drilled, show bot	h surface and bottom ho	ole locations)	Section, Township, and Range:
API Number: 25	Well Type (oil, gas, is	njection, other):	Section 10, T28N, R51E  County:
Sine Comp Well	Oil		Roosevelt
BOARD USE ONLY		The undersigned h	ereby certifies that the information contained

BOARD USE ONLY	The undersigned hereby certifies that t	he ir
Approved MAR 6 1996  Date Original signed by Jon Hjartarson, Chief Field Inspector	on this application is true and correct:  2/20/96  Date  Aggregation	
Name Title 1	Raymond Roods Distr.	iot

<del>- Manager</del>

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ARM 36.22.307, Submit In Quadruplicate To: 1003, 1004, 1011, Rev. 8-92
DEPT. DE INTERIOMONTANA Board of Oil and Gas Conservation 1013, 1103, 1222, 1301, 1306, and 1309 BUR. OF LAND MANAGEMENT Billings or Shelby Office 96 MAR !! AM 8 48 Sundry Notices and Report of Wells Lease Name: Operator STATE Murphy Exploration and Production Company Huber Lease Type (Private/State/Federal): Private P.O. Box 547 Zip Code City State Wall Number: Mt. Poplar No. 4-A Telephone Number ( Telefax Number ( Unit Agreement Name: Location of well (1/4-1/4 section and footage measurements): 660' from N Line and 1905' from E Line Field Name or Wildcar: East Poplar Unit NW NE Section 10, T28N, R51E If directionally or horizontally drilled, show both surface and bottom hole locations) Section, Township, and Range: Section 10, T28N, R51E API Number: Well Type (oil, gas, injection, other): County: 25 0 8 5 0 5 3 7 4 Roosevelt Oil Indicate below with an X the nature of this notice, report, or other data: Notice of Intention to Change Plans Subsequent Report of Mechanical Integrity Test Natice of Intention to Run Mechanical Integrity Test Subsequent Report of Stimulation or Chemical Treatment Notice of Intention to Stimulate or to Chemically Treat Subsequent Report of Perforation of Cementing Notice of Intention to Perforate or to Cement Subsequent Report of Well-Abandonment  $\square$  $\Box$ . Notice of Intention to Abandon Wall Subsequent Report of Pulled or Altered Casing Repair Notice of Intention to Pull or Alter Casing Subsequent Report of Drilling Waste Disposal Notice of Intention to Change Well Status Subsequent Report of Production Waste Disposal Supplemental Well History Subsequent Report of Change in Well Status Other (specify) \_ Subsequent Report of Gas Analysis (ARM 36.22.1222) Commingle Describe Proposed or Completed Operations: Describe planned or completed work in detail. Attach maps, well-bore configuration diagrams, analyses, or other information as necessary. Indicate the intended starting date for proposed operations or the completion date for completed operations. Tested casing for casing leak. Found casing leaks at 1300' and 121'. retrievable bridge plug at 2491'. Squeezed casing leaks with 100 sacks Set packer at 4780'. premium cement with 5# HR-5 added to 50 sacks. Pro duced commingled. Pump tested 2 months. Tested 7 BO and 140 BW. No increase in production. Pull rods, pump, tubing and packer from hole. Run packer, reset at 5250'. Well producing from the B-1 at the rate of 9 BO

BOARD ÜSE ONLY						
Approved_	Şul <sub>a</sub>	:				
тррю 100 _	De	ale .	_			
٠.			•	<b>:</b> -		
	Name		Tille			

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The undersigned hereby certifies that the information contained on this application is true and correct:						
Feb. 20, 1996	Rayperso feele					
Date	Signed (Agent)					
Raymond Reede	District Manager					
Print Name & Title						

Form 20 Rev. 8-92 Submit In Quadruplicate To:

Monta Board of Oil and Gas Coservation

1520 East Sixth Avenue

Helena Montana 59620-2301

ARM 36.22.307 ARM 36.22.605 ARM 36.22.1308

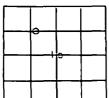
## Notice of Intent to Change Operator

The undersigned Transferor hereby notifies the Board of Oil and Gas Conservation of its intention to transfer ownership and/or operation of the following wells to the undersigned Transferee:

Lesse Name: Huber		Lease type: (Private, State, Federal, Indian) Private
		Field name:
County: Rooseve	lt	East Poplar
	Us: (Include official well name and number as reflected U including quarter-quarter section, footage measurem	on Board of Oil & Gas Conservation records, API well number, and exact ents, Section, Township, and Range.)
	· ·	·
Huber No.	1, Huber No. 2, Huber No. 3,	Huber No. 4-A, and Huber No. 5-D
See attach	ed sheet for information	·
Effective	change of owner/o	perator from Murphy Exploration
and Produc	tion Company to	
	Transferor's Statement	Transferee's Statement:
operator of record the Transferor co associated equipm approved by of the	e the Transferce named herein as the owner and/or to the above described well(s). I acknowledge that ontinues to be responsible for said well(s) and all nent and facilities until such time as this transfer is the Montana Board of Oil and Gas Conservation. I formation contained herein is true and correct:	I hereby accept the designation of operator/owner for the above described well(s). I understand that this transfer will not be approved until the Transferce has complied with the Board's bonding requirements. I acknowledge that under Section 82-11-101 MCA, the Transferce herein is responsible for the costs of proper plugging and restoration of the surface of the well(s) described above. I certify that the information contained herein is true and correct:
Company	Murphy EXPRO	Company
Street Address	131 South Robertson Street	Street Address
P.O. Box	Box 61780	P.O. Box
City, State, ZIP	New Orleans, LA 70161-9969	Ciry, State, ZIP
Signed		Signed
Print Name	Sidney W. Campbell	Print Name
Title	Manager Onshore Operations	Title
	(504) 561-2594	Telephone ( )
	BOARDIU	SEIONLY
Approved		Field Office Review - Date Initial
	Dac	Inspection
· · · · · · · · · · · · · · · · · · ·		Records Review
	Name Title	Operations
Oper. No.	Bond No.	Oper. No. Bond No.

- A					*****				
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	WELL CORRECT	TLY I	si niningic	AL SURVEY	Replace	1	y fran	$\frac{N}{l}$	Form No. 4
1,00,00	1 1 1		2. (Convenience)	: ()	1-0				(Gen. Rule 206.3 & 231)
			• • •	(5	DBMIT IN TRI	PLICAT	E)		
		$\neg$	MAR 2.4	OF TH	CONSERV	ATION	COMMISSIO	N	
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<u> </u>	<u> </u>								
a:									
Company_E	. A. Polur	nbus. Jr.	•	Leas	eHube	<u>r</u>			Well No. 4-A
Address 4	14 Patters	on Bldg	Denver.	Colorad	O Field (c	r Area	Y East I	Poplar	<del></del>
Sec. 10	✓ · T 28	8N - R	51E	: County	Roose	velt		· Flevation	2, 091 (D.F., R.B. or G.L.)
Commenced	drilling Dec	ember 11		, 19 <u>.</u>	25; Comple	ted	February	7 21	, 19 <u><b>66</b></u>
The inf	ormation given	herewith is	a complete	and correct a	ecord of the	well.	The summa	ry on this pag	ge is for the condition
of the well a	at the above da	ate.	•						
Completed a	s Cil v	gas well, dry l	hola)	<del></del>	Signed	<u>~ </u>	- 10000	300	<u> </u>
	(011 11011)	g ,,, .	,		Title		Engineer		
					_				
					Date		March 16	1966	
			IMPO	RTANT ZO	NES OF PO	DROSI	TY		
				as by G, wa	-			•	
Prom 5.60	6 to	5.613 <u>vi</u>	1		From		to	- 1 - C	TIVED
	to	5, 795 Ui					to		
	to						to		41: 1:: 1966
								Ol) A .,	1301221 - Lud
				CASING	RECORD			Oli V.	tod (ISSION)
Size	Weight	1		Ī			1 _	Sacks of	- 14 marinin - Birthing
Casing	Per Ft.	Grade	Thread	Casing So	e <b>t</b> F	rom Q11	To Surface	Sacks of Cement	
Size Casting 8 5/8 5 1/2	Weight Per Ft. 24 15.5	Grade J-55 J-55	Thread 8rd 8rd	Ī	et F	750	To Surface Surface	Sacks of	- 14 marinin - Birthing
8 5/8	Per Ft. 24	J-55	8rd	Ī	et F	911	Surface	Sacks of Cement	- 14 marinin - Birthing
8 5/8	Per Ft. 24	J-55	8rd	Casing So	5,	911	Surface	Sacks of Cement	- 14 marinin - Birthing
8 5/8	Per Ft. 24	J-55	8rd	Casing So	et F	911	Surface	Sacks of Cement	- 14 marinin - Birthing
8 5/8	Per Ft. 24 15. 5	J-55 J-55	8rd 8rd	Casing So	5,	911 750	Surface Surface	Sacks of Cement 325 175	- 14 marinin - Birthing
8 5/8	Per Ft.  24  15.5	J-55 J-55	8rd 8rd	TUBING	RECORD	911 750	Surface Surface	Sacks of Cement 325 175	- 14 marinin - Birthing
8 5/8	Per Ft. 24 15. 5	J-55 J-55	8rd 8rd	Casing So	5,	911 750	Surface Surface	Sacks of Cement 325 175	- 14 marinin - Birthing
8 5/8	Per Ft. 24 15. 5	J-55 J-55	8rd 8rd	TUBING	RECORD Thread	911 750	Surface Surface	Sacks of Cement 325 175	- 14 marinin - Birthing
8 5/8 5 1/2  Rotary tools	Per Ft.  24  15.5  Siz Tubi  2 7/1	J-55 J-55	8rd 8rd Weight Per Ft.	TUBING  Grade  J-55  COMPLET	RECORD Thread 8rd	911 750   An	Surface Surface  sount 736   5, 76	Sacks of Cement  325 175  Perforations  730 - 5, 725	- 14 marinin - Birthing
Rotary tools	Per Ft.  24  15.5  Siz Tubi  2 7/1  s were used from were used from	J-55 J-55 8   P	8rd 8rd Weight Fer Ft.	TUBING  Grade  J-55  COMPLET	RECORD Thread 8rd	911 750 An   5, 7	Surface Surface 30unt   736   5, 76 to 5, 79	Sncks of Cement 325 175  Perforations 730 - 5, 725	Cut and Pulled from
Rotary tools	Per Ft.  24  15.5  Siz Tubi  2 7/1	J-55 J-55 8   P	8rd 8rd Weight Fer Ft.	TUBING  Grade  J-55  COMPLET	RECORD Thread 8rd	911 750 An   5, 7	Surface Surface 30unt   736   5, 76 to 5, 79	Sncks of Cement 325 175  Perforations 730 - 5, 725	- 14 marinin - Birthing
Rotary tools Cable tools Total depth.	SIZ Tubi 2 7/10 s were used from 5, 795 from Performance of the perfor	J-55 J-55  Sering P  8   Surface 5, 76  t.; Plugged	8rd 8rd Weight Fer Ft. 6.5	TUBING  Grade  J-55  COMPLET	Thread 8rd ION RECOI	911 750 An   5, 7	Surface Surface  Surface  5, 76  to 5, 79  from 5, 7	Sacks of Cement  325 175  Perforations 730 - 5, 725  0 5 750  ACED, CEMENT	Cut and Pulled from
Rotary tools Cable tools Total depth.	Siz Tubi 2 7/10 s were used from 5, 795 for	J-55 J-55  Reing P  Rom Surf  5, 76  t.; Plugged I	8rd 8rd Weight Fer Ft.	TUBING  Grade  J-55  COMPLET	Thread 8rd ON RECOI	911 750 An   5, 7	Surface Surface  30   5, 76   10   5, 79    from   5, 79	Sacks of Cement  325 175  Perforations 730 - 5, 725  0 5 750  ACED, CEMENT	Cut and Pulled from
Rotary tools Cable tools Total depth.	Siz Tubi 2 7/10 s were used from 5,795 for Performance of the Performa	J-55 J-55  Reing P  Rom Surf  5, 76  t.; Plugged I	8rd 8rd Weight Fer Ft. 6.5	TUBING  Grade  J-55  COMPLET  From  5,606	Thread 8rd  ON RECOIL  T.D.; Ope  ACID  erval  To  5,613	911 750 An   5, 7 RD	Surface Surface Surface  Surface  136   5, 76  to 5, 79  from 5, 79  hot, sand fr  Amount Material 1	Sacks of Cement  325 175  Perforations  730-5, 725  O 5 750  ACED, CEMENT of Jsed  XFM	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.	Siz Tubi 2 7/10 s were used from 5,795 for Performance of the Performa	J-55 J-55  Reing P  B  From Surf  5, 76  t.; Plugged I	8rd 8rd Weight Fer Ft. 6.5	TUBING  Grade  J-55  COMPLET	Thread 8rd ION RECOI	911 750 An   5, 7 RD	Surface Surface Surface  5,76 to 5,79 from 5,79 hot, sand fr	Sacks of Cement  325 175  Perforations  730-5, 725  O 5 750  ACED, CEMENT of Jsed  XFM	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795
Rotary tools Cable tools Total depth.	Siz Tubi 2 7/10 s were used from 5,795 for Performance of the Performa	J-55 J-55  Reing P  B  From Surf  5, 76  t.; Plugged I	8rd 8rd Weight Fer Ft. 6.5	TUBING  Grade  J-55  COMPLET  From  5,606	Thread 8rd  ON RECOIL  T.D.; Ope  ACID  erval  To  5,613	911 750 An   5, 7 RD	Surface Surface Surface  Surface  136   5, 76  to 5, 79  from 5, 79  hot, sand fr  Amount Material 1	Sacks of Cement  325 175  Perforations  730-5, 725  O 5 750  ACED, CEMENT of Jsed  XFM	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.	Siz Tubi 2 7/10 s were used from 5,795 for Performance of the Performa	J-55 J-55  Reing P  B  From Surf  5, 76  t.; Plugged I	8rd 8rd Weight Fer Ft. 6.5	TUBING  Grade  J-55  COMPLET  From  5,606 5,785	Thread 8rd ON RECOIL  T.D.; Ope ACID  erval To 5,613 5,795	911 750 An   5,7 RD	Surface Surface Surface  Surface  136   5, 76  to 5, 79  from 5, 79  hot, sand fr  Amount Material 1	Sacks of Cement 325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jsed 6 XFM 6 RA	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.	Siz Tubi 2 7/10 s were used from 5,795 for Performance of the Performa	J-55 J-55  Reing P  B  From Surf  5, 76  t.; Plugged I	8rd 8rd Weight Fer Ft. 6.5	TUBING  Grade  J-55  COMPLET  From  5,606 5,785	Thread 8rd  ON RECOIL  T.D.; Ope  ACID  erval  To  5,613	911 750 An   5,7 RD	Surface Surface Surface  5,76  to 5,76  to 5,79  from 5,79  hot, sand fr  Amount Material 1  gal. 157  gal. 157	Sacks of Cement 325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jsed 6 XFM 6 RA	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.  From  5,606	Siz Tubi 2 7/1 s were used from 5,795 ft To 5,613	J-55 J-55  See Prom Surface Su	8rd 8rd Weight er Ft. 6.5  Sace 50 back to er and d Type ets/Ft.	TUBING  Grade  J-55  COMPLET  From  5,606  5,785	Thread 8rd ON RECOIL  T.D.; Ope ACID  FOR S, 613 5, 795	911 750 Ann hole 12ED, 5 250 500	Surface Surface Surface Surface  136   5, 76  to 5, 79  from 5, 79  from 5, 79  gal. 157  P&A show p	Sacks of Cement 325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jsed 6 XFM 6 RA	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.  From  5,606  Well is pro	SIZ Tubi 2 7/1 s were used from 5, 795 from 5, 613	J-55 J-55  Seing P  8  From Surf 5, 76  t.; Plugged  ATIONS  Number Size an  4-1/2" J	8rd 8rd Veight For Ft. 6.5  Sace 50 back to er and drype ets/Ft.	TUBING  Grade  J-55  COMPLET  From  5,606 5,785  INITIAL P -3	Thread  Srd  ON RECOI  To  FORDUCTIO  (pool) for	911 750 Ann hole 12EO, 5 250 ON	Surface Surface Surface Surface  136   5, 76  to 5, 79  from 5, 79  from 5, 79  Amount Material 10  gal. 157  P&A show p	Sacks of Cement  325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jised b XFM c R.A	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.  From  5,606	SIZ Tubi 2 7/1 s were used from 5, 795 from 5, 613	J-55 J-55  See Prom Surface Su	8rd 8rd Veight For Ft. 6.5  Sace 50 back to er and drype ets/Ft.	TUBING  Grade  J-55  COMPLET  From  5,606 5,785  INITIAL P -3	Thread 8rd  ON RECOI  True  True  True  Acid  From True  From True	911 750 Ann hole 1250, s 250 500	Surface Surface Surface Surface  136   5, 76  to 5, 79  from 5, 79  from 5, 79  Amount Material 1  gal. 157  P&A show p	Sacks of Cement 325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jsed 6 XFM 6 RA	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.  From  5,606  Well is pro	Siz Tubi 2 7/1 s were used from 5, 795 for 5, 613 s ducing from 1	J-55 J-55 J-55  See Prom Surf 5, 76 t.; Plugged  ATIONS  Number Size and 4-1/2" J	8rd 8rd 8rd Weight er Ft. 6.5  Sace 50 back to er and drype ets/Ft.	TUBING  Grade  J-55  COMPLET  From  5,606  5,785  INITIAL P  -3	Thread  Srd  ON RECOI  To  5,613  5,613  5,613  (pool) for  ours  (pump	911 750 Ann hole 12EO, 5 250 ON	Surface Surface Surface Surface  136   5, 76  to 5, 79  from 5, 79  from 5, 79  Amount Material 1  gal. 157  P&A show p	Sacks of Cement  325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jised b XFM c R.A	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.  From  5,606  Well is pro	Siz Tubi 2 7/10 s were used from 5,795 for serval To 5,613 adducing from 1	J-55 J-55 J-55  Strom Surf 5, 76 t.; Plugged  ATIONS  Number Size an  4-1/2" J  Charles  barrels of oil	8rd 8rd 8rd  Weight Fer Ft. 6.5  Sace 50 back to er and drype ets/Ft.  B-1 & C	TUBING  Grade  J-55  COMPLET  From  5,606  5,785  INITIAL P  -3	Thread  Srd  ION RECOID  To 5,613  5,613  5,613  5,795  RODUCTIO  (pool) for 100 100 100 100 100 100 100 100 100 10	Ann hole IZEO, S 500	Surface Surface Surface Surface  5,76  to 5,79  from 5,79  from 5,79  Amount Material 1  gal. 157  P&A show p	Sacks of Cement  325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jsed o RA	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.  From  5,606  Well is pro	Siz Tubi 2 7/10 s were used from 5,795 for serval To 5,613 adducing from 1	J-55 J-55 J-55  See Prom Surf 5, 76 t.; Plugged  ATIONS  Number Size and 4-1/2" J	8rd 8rd 8rd  Weight Fer Ft. 6.5  Sace 50 back to er and drype ets/Ft.  B-1 & C	TUBING  Grade  J-55  COMPLET  From  5,606 5,785  INITIAL P  -3  hour	Thread  Srd  ON RECOI  To  5,613  5,613  5,613  (pool) for  ours  (pump	Ann hole IZEO, S 500	Surface Surface Surface Surface  136   5, 76  10   5, 76  10   5, 79  10   5, 79  10   5, 79  10   5, 79  10   5, 79  10   5, 79  10   5, 79  11   78   78   78   78   78   78   78	Sacks of Cement  325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jsed o RA	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750
Rotary tools Cable tools Total depth.  From  5,606  Well is pro	Siz Tubi 2 7/10 s were used from 5,795 for serval To 5,613 adducing from 1	J-55 J-55 J-55  Strom Surf 5, 76 t.; Plugged  ATIONS  Number Size an  4-1/2" J  Charles  barrels of oil	8rd 8rd 8rd  Weight Fer Ft. 6.5  Sace 50 back to er and drype ets/Ft.  B-1 & C	TUBING  Grade  J-55  COMPLET  From  5,606 5,785  INITIAL P  -3  hour	Thread  Srd  ION RECOI  TO  To  5,613  5,795  RODUCTIO  (pool) for  (pump  s.  nours, or	Ann hole IZEO, S 500	Surface Surface Surface Surface  5,76  to 5,79  from 5,79  from 5,79  Amount Material 1  gal. 157  P&A show p	Sacks of Cement  325 175  Perforations 730 - 5, 725  O 5 750  ACED, CEMENT of Jsed o RA	Cut and Pulled from  Cut and Pulled from  Fig. 10. 5, 795  ED  Pressure 750

LOCATE WELL CORRECTLY



## (SUBMIT IN TRIPLICATE) TO

## OIL AND GAS CONSERVATION COMMISSION OF THE STATE OF MONTANA BILLINGS OR SHELBY

### LOG OF WELL

Company_	EAI	<del>-</del> colum	Marie Ja			aseH	ulser				Well No. 4	Α
Address	414 }	to theirs	ev. Pilda	Connec	<u> Colorocia</u>	Fie	ld (or Ar	ea) <u>E</u>	4.00	146101		
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				y hole)		Signe	d	<u>_</u> _				
		(oll well,	gas well, dr	y hole)		Title_	<u> </u>	. wa 24				
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					CASIN	G REC	ORD					
Sixo Casing	We Per	ight Ft.	Grade	Thread	Castng	Set	Prom	т		Sacks of Cement	Cut s Pulled	nd from
<u>∂</u> 5/8	<u> </u>	<del></del>	7-22	184cl	_		911	5416		325		
5/2	15	\$	7-82	- E/4 9			5750	2004		175		
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					TUBIN	G RECO	ORD	-		· · · · · · · · · · · · · · · · · · ·		
		Size Tubi	ag	Weight Per Ft	Grade	Thre	nd /	mount	Ī	Perforations	1	
		27/5	<u> </u>	*· Z	7.22	84	cl	১০১১	5	720- 3725	ゴ	
					COMPLET	TION RI	CORD					
Rotary tool	s were	used fro	om Sarry	<u> </u>				. to <u></u>	760			
Cable tools	were us	ed from	. Physical	book to		T.D.	O 1-1	. 10	795 74	ట1	- 5.35	
Total depth		-31(	., Flugged	Dack to		1.D.;	Орел пол	e irom			10. 3 1 7 3	
		PERFORA	TIONS				ACIDIZED,	SHOT, SA	ND PR	ACED, CEMENT	ED	
From	terval To	<del></del>	Numi Size e	per and and Type	From	nterval To	<del>,</del>	A: Mat	mount erial (	of Jeed	Pressur	•
-606	561	a.	4.12 301		260L	5612	. 7	10000			750	
	<u> </u>				2852	579	5 5	00 gal	% کا	RA	হিত্	
	├─-				∦	+						
		<u>'</u>		<del></del>		<u> </u>	<del>- ' (</del>	U P&A al	ow p	ugs above)		
					INITIAL	PRODU	CTION					
Well is pro	ducing	from C	horles	<u> 3.1 € C.</u>	3	(pool)	) formatio	n.				
I. P	۹,	b	arrels of oi	l per	<u>Δ.</u>	ours	Parapo	va_				_
							oumping or	(lowing)				
	٦.	M	ict of gas p	er per	hou 24	LTS. bour ∼	r5	7	or. ·	w c		
		0art	ers of Man	or her		DOURS, O	l	•	_70	w.C.		
					,	( V E.M.)						

INTITIAL.	PRODUCTION—(	Continue

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initial 10	day average production	(bbl./day) (if taken)	
	(if measured): Tubingps		shut-in
	. Casing ps	osi flowing;psi	shut-in
Gravity_	API (corrected to 60° F.)		

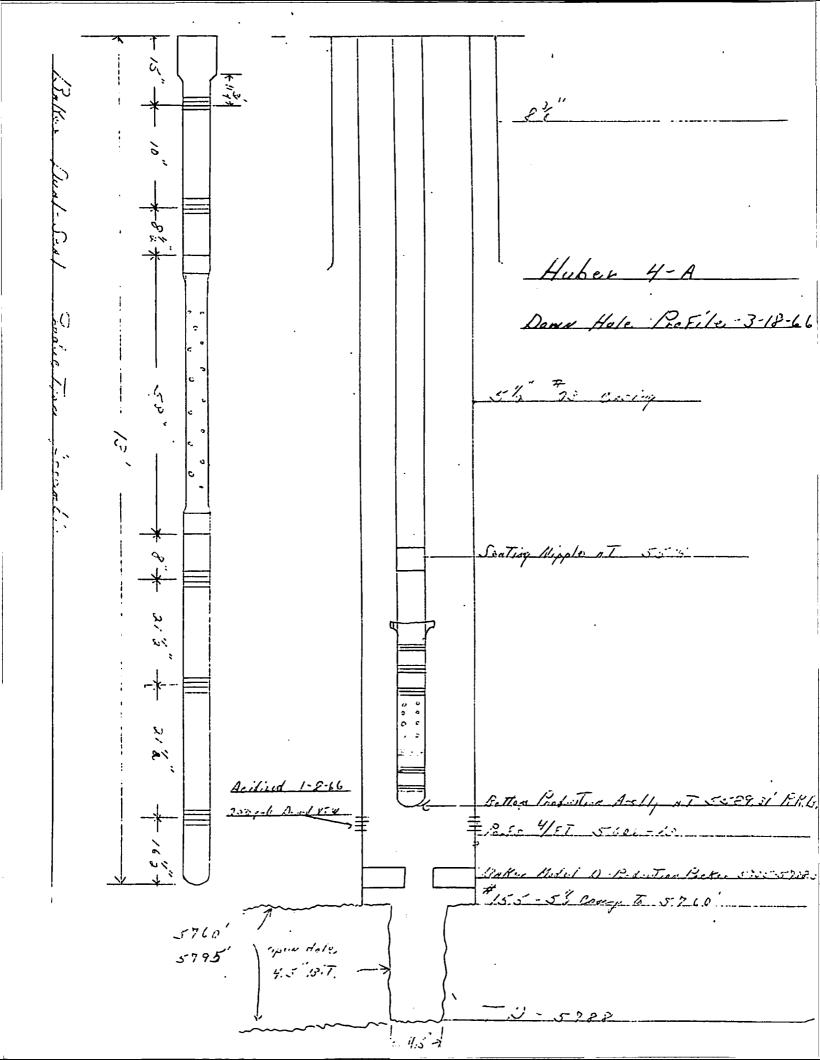
#### DRILL STEM TESTS

D.S.T. No.	From	To	Tool Open (Min.)	Shutin	P.P.	B.L.P.	Becovery	Cushion
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### LOGS RUN

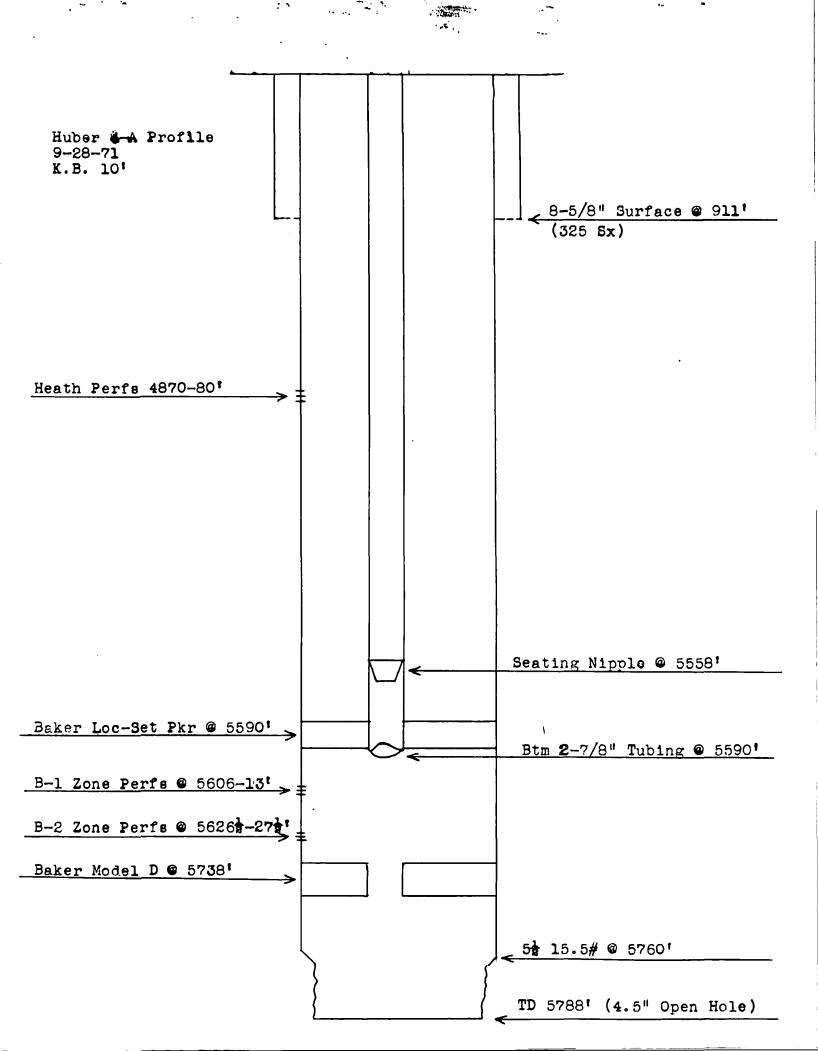
Туре	Intervals			
	From	170		
Gamma Pay Neutron	יצרוצ.	9700		
····				

		FORMATION RECORD	
From	То	SAMPLE AND CORE NO. AND DESCRIPTION	Top of Formation
182~	4647	Thole & Line	Health 9822
1617	4597	Sand & shole	Ata 4996
1807	4912	Shale	
.142	2282	Sund & shale	Kibbey 5142
1 دو.	5795	I me & anhydralo	Charles 5397
			·
		<u> </u>	



8 18 SURE Pipe 911 KB W/2255KS Huben No. 4-A 27/8 Tubing Down Hole Profile (April 12, 1967) All Measurements by K.B. (10') Set wfieque 16 pull - Top AT 557213 5.12 · Open end Tubing @ 5608 DZ K.B. 4 (B-1) Perfs 4/FT. From 5606-13 K.B. Aciderate of 750 gate Down R-A-5 Jan 13, 1967 Baken Mobel D. Production Presker C5735'- 325' K. B. 5760'-51/2"- 15,5 CASING K.B. T.D . 5788 K.R. X (4.5" open bule)

· . ·—		
K/B. 10.00		
		8 5/8 Surface @ 911 325 SX
Huber 4A 6-10-69		
		Seating Nipple @ 5551 KB
		Baker Loc-Set 5573 KB
		2 1/8 Tubing 5608 KB
B-1 Perf 5606-13 KB	→ =	Baker Model D (No Flapper) @ 5738 K
		5½ 15.5# @ 5760 KB  TO. 5788 KB (4.6" open hole)



### HUBER NO. 4A

### WELL COMPLETION REPORT

NW4 NE% SECTION 10, T28N, R51E

ROOSEVELT COUNTY, MONTANA

Prepared by E.C. Barnholt Petroleum Engineer OPERATOR:

E. A. Polumbus, Jr.

LEASE:

Huber No. 4A

LOCATION:

NW/4 NE/4 Section 10, T28N - R51E,

Roosevelt County, Montana

ELEVATION:

2,091' KB, 2,081' GL (Estimated from Huber #4A)

CONTRACTOR:

Signal Drilling Co. Rig No. 3, Tool Pusher

Red Loudermilk

SPUD:

12/11/65

ROTARY OFF:

12/23/65

COMPLETION RIG: COMPLETED:

12/31/65 1/11/66

SURFACE CASING:

30 Jts. new 8 5/8" J-55 Csg. set at 911' KB cemented

w/325 sx. 50-50 pozmix, 2% HA5 cement circulated

PRODUCTION CASING: New 5 1/2", 15.5 lb. J-55 Csg. @ 5,752' KB

cemented w/175 sx.

TOTAL DEPTH:

5, 795' KB

OPEN HOLE:

4 1/4" 5, 752-5, 795'

PERFORATIONS:

5,606-5,613' KB

PERMANENT DATUM: 10' above GL

CORES:

None

DST:

None

LOGS:

Lane Well Gamma Ray Neutron, Acoustic Cement

Bond Log

TOP CEMENT:

4, 357'

#### LOG TOPS

4,8221 Heath 4,9901 Otter 5, 148' Kibbey 5, 397' Charles

#### BIT RECORD

No.	Size	Make	Type	In	Out	Footage	Hrs.
1	7 7/8	Smith	DTJ	915	2,447	1,532	13 3/4
2	7 7/8	Smith	DTJ	2,447	3, 301	854	7 1/4
3	7 7/8	нтС	OSCIG	3,301	3,719	418	11
4	7 7/8	HTC	OSCIG	3,719	4,160	451	13 1/2
5	7 7/8	HTC	OSCIG	4,160	4,444	284	9
6	7 7/8	HTC	OSCIG	4,444	4,728	284	11 3/4
7	7 7/8	HTC	OWV	4,728	4,880	152	10
8	7 7/8	Smith	SV2	4,880	4,931	51	4
9	7 7/8	HTC	OWV	4,931	4,981	50	6 1/4
10	7 7/8	HTC	OWV	4,981	5,065	84	9 1/4
11	7 7/8	Smith	SV2	5,065	5, 178	113	7 1/2
12	7 7/8	HTC	OWV	5, 178	5, 265	87	6 1/2
13	7 7/8	HTC	OWV	5,265	5,377	112	10 1/2
14	7 7/8	Smith	SV2	5,377	5, 546	169	12 1/2
15	7 7/8	Smith	SV2	5,546	5,673	127	9 3/4
16	7 7/8	HTC	OWV	5,673	5, 760	87	7

#### MUD RECORD

Date	Wt.	<u>Vis.</u>	Cake	Water Loss	Salt PPM	<u>PH</u>	% Oil	% Water	% Solids	Remarks	Cumulative Mud Cost
12/11	-	-	-	-	-	-	_	-	-	Salt Wtr. & Gel	
12/12	-	-	-	-	-	-	-	-	-	Gel & LCM (losing circ.)	
12/13	-	-	-	-	-	-	-	-	-	Salt Wtr. & Gcl	
12/14	-	-	-	-	-	-	-	-	-	Salt Wtr. & Oil (stuck DP)	\$ 736.00
12/15	-	-	-	-	-	-	-	-	-	Gel & Fiber	839.00
12/16	-	-	-	-	-	-	-	-	-	Mudded Up (Drill Heath)	1,695.00
12/17	9.7	38	2/32	4.0	181,500	6.0	6	90	4		1,735.00
12/18	10.1	38	2/32	12.8	181,500	6.5	6	84	10		1,801.00
12/19	10.2	40	2/32	9.6	168, 200	6.5	6	86	8		1,905.00
12/20	10.4	38	3/32	23.0	165,000	6.5	5	85	10		2,003.00
12/21	10.4	41	2/32	13.6	165,000	6.5	5	85	10		2,080.00
12/22	10.2	48	2/32	14.2	165,000	6.5	5	85	10	Prep. to run csg.	2,182.00

#### HISTORY OF COMPLETION

Date

Status

- 12/31 Western rig arrived on location 11:00 A.M. Rigged up,
  ran 4 1/4" bit and subs, 2 3 1/2" drill collars, 120 jts.
  2 7/8" J-55, 6.5# EUE tbg. Set 3 stands back in derrick
  to lower fresh water level and prevent freezing. Shut down
  for night.
- 1/1/66 Off New Years Day
- 1/2 Finished running tubing, T.D. at 5, 740.49 KB. Displaced fresh water with lease crude using rig pump. Rigged up BOP and drilling equipment. Drilled 18.51 ft. of cement, plugs, shoe and 7 7/8" hole lost while attempting to reciprocate 5 1/2" csg.
- Drilled to 5, 785 KB stopping every foot testing for returns, no returns. Good drilling break at 5, 785, drilled to 5, 790 shut down attempted to break formation down with rig pump pressured up to 1,500 psi. No break down or pressure bleed off, circulated 50 min., pulled bit up inside 5 1/2", shut well in for night.

1/4

Drilled to 5, 795 sharp increase in drilling time last 1 ft.

Circulated 1 hr., released drilling equipment, rigged up

Dowell, spotted acid over 10 ft. of C-3 formation, pulled

bit up to 5, 789 KB, acidized "C" zone as per treatment

report (Figure 1). Shut well in @ 3:23 P. M. Opened well

up at 7:30 P. M. Pressure 1, 450 psi. Flowing through

control head "cracked open". Well performed as follows:

		Flowing	
	Time	Pressure	Remarks
J	(2):00 p.m. 8:30 p.m.	475 psi	Flowing back load oil
	8:30 p.m.	225 psi	Flowing back load oil
	9:00 p.m.	210 psi	Flowing back load oil
	9:30 p.m.	210 psi	Flowing back load oil
	10:00 p.m.	210 psi	Flowing back load oil
		1.5	rec. 4.66 bbls.
	left well flowing		

- 1/5 Flowing press. 310 psi, rec. 3.11 bbls. load oil in 9 hrs.
  total 7.77 rec. opened well up, died in 15 minutes, swabbed
  130 bbls. load oil and acid water cum. recovery 138 bbls.
  All load & treating fluid recovered. Fluid level holding at
  130 ft. Putled bit up inside 5 1/2" csg. Shut in for night.
- Opened well, pressure gauge showed no pressure. Estimate
  100-150 psi when well was opened (gauge probably frozen).

  Pressure bled off immediately, lowered tubing back to 5, 789.

1/6 (cont'd) Rigged up to swab, well gassed small amount while running swab. Hit fluid 650 ft. off bottom, fluid buildup 500 ft. overnight. Swabbed 500 ft. gassy live oil and water approx.

90% oil. Ran swab again, hit fluid 130 ft. off bottom, recovered 130 ft. fluid 90% water. Pulled tubing, broke off bit and layed down drill collars, filled hole to 4, 200 ft. w/lcase crude. Rigged up Lane Wells, ran Gamma Ray - Neutron Log w/collar locator, acoustic cement Bund Log.

Set Baker Model D packer at 5, 735 KB. Model D has push out plug and no flapper valve. Perforated B-1 zone 5, 606-13 w/4 jets per ft. NFC II 1 cone shot, 18 grain, 11" penetration .48" hole. Checked gun, all shots fired. Shut well in.

Note: There is a 7 ft. difference between T.D. of deepened well and GRN Log T.D.

1/7 Ran tubing with Baker seal assemblies, perforated nipple and seating nipple. Top of perforated nipple at 5,606 KB.

Swabbed well down, recovered all fluid plus 1 1/2 bbls.

noowater. Practically no fluid build up, well not commercial natural. Prep. to acidize.

Date	Status
1/8	Loaded well with lease crude, acidized B-l zone as per
	treatment report (Figuré 2). Swabbed well recovered
	127 bbls. load oil and acid wate:. All load and treating
	fluid recovered plus 2 bbls. of formation fluid. Sample
	caught on last run with swab was 40% oil. Shut in for night.
1/9	Opened well, no pressure. Fluid buildup 1,000 ft. over-
	night. Pulled swab, recovered 1,400 ft. fluid, 40% oil.
	Turned well over to Clair Haughey with instructions per
	Tony Polumbus to put on pump and test B-l zone. Drove

to Billings with 1 set of samples to be delivered to the

Montana Oil and Gas Conservation Commission.

#### Tubing Detail as of Acid Job on B-l Zone

Bottom	6.75	Bottom Scal Assembly
Next	5.80	Perforated Nipple
Next	2.40	Top Seal Assembly
Next	31.27	l jt. 2 7/8", 6.5# J-55 EUE tbg.
Next	. 90	Seating Nipple
Next	5,566.92	2 7/8", 6.5# J-55 EUE tbg.
Next	8.90	Below RKB
Total	5,622.94	

#### TREATMENT REPORT

7	١.	
7:3	$\mathbf{r}$	

Time	Rate	In	Tubing	Casing	Status
1:22			1000		Test lines & well head
1:30			1000	1000	Test hole & BOP
1:34	•				Start acid down tbg. to spot
1:49		33.7	825	800	Acid spotted 33.7 bbl let soak
1:57		34	1000	1050	Increase tbg, psi to 1000 - let soak
2:04		34.1	1200	1250	Increast tbg. psi to 1200 - let soak
2:10		34.2	1400	1450	Increase the psi to 1400 - let soak
2:15		34.3	1600	· 1650	Increase tbg, psi to 1600 - let soak
2:20		34.4	1800	1850	Increase tbg. psi to 1800 - let soak
2:31		34.5	2000	2050	Increase tbg. psi to 2000 - slow bleed
					to 1700 in 8 min.
2:41		34.7	2000	2050	Formation break 1950 to 1800
2:42		34.8	1800	1850	Formation feeding at .3 BPM at 1800 psi
3:19	. 3	45.7	1800	1800	12 bbl. acid displaced - start 1 bbl. over-
					flush
3:23	. 3	46.7	1800	1800	l bbl. over flush complete
					Shut Down

Maximum Pressure	_	Avg. Liquid Injection Rate	Immediate Shut In Pressure	- Type
2000	1800	. 3	1775	500 gal. @ 15% - RA-5

#### TREATMENT REPORT

Time	Bbls. In	Tubing	Status
8:20			Fill hole w/oil
8:58			Start acid down tbg. to spot
9:12	32.5		Acid spotted - let soak
9:18	32.8	200	Pressure tbg. to 700 psi - displace 1/4 bbl.
9:28	33	200	Pressure thg. to 750 psi - displace 1/4 bbl.
9:36	33.2	200	Pressure tbg. to.750 psi - displace 1/4 bbl.
9:45	33.5	200	Pressure the to 750 psi - displace 1/4 bbl.
9:55	33.7	200	Pressure tbg. to 750 psi - displace 1/4 bbl.
10:06	34.2	200	Pressure tbg. to 750 psi - displace 1/2 bbl.
10:17	34.8	200	Pressure tbg. to 750 psi - displace 1/2 bbl.
10:28	35.8	200	Pressure tbg. to 650 psi - displace 1 bbl.
10:42	36.5	200	Pressure thg. to 750 psi - displace 3/4 bbl.
10:55	37.5	200	Pressure tbg. to 750 psi - displace 1 bbl.
11:09	38	200	Pressure tbg. to 575 psi - displace 1/2 bbl.
			5 1/2 bbl. displaced shut down.

Maximum Pressure	15 Minute Shut In Pressure	Туре
750	200	250 gal. @ 15% - XFM

### CHRONOLOGICAL WELL HISTORY

Date	Status	Deviation
12/11	Spud	
12/12	Drill to 920 ft. ran surf. csg. Lost Circulation @ 847 ft.	1/20
12/13	Cemented surf. csg., nipple up & WOC 12 hrs. Press tested csg. to 500 psi held o.k. Drilled to 1,560'	3/4°
12/14	Drilled to 3, 401	10
12/15	Drilled to 3,924'. Stuck at 3,418', spotted 40 bbl. crude	l 1/2°
12/16	Drilled to 4,444', strapped D.P. Corrected Board & Geolograph (4')	2°
12/17	Drilled to 4,860', mudded up, checked BOP	2 1/40
12/18	Drilled to 4,986'	
12/19	Drilled to 5, 190', checked BOP	2°
12/20	Drilled to 5,377	1 3/40
12/21	Drilled to 5,628', strapped D. P. Corrected Board & Geolograph (2')	1 1/20
12/22	Drilled to 5, 760' T.D. Cond. Hole 2 hrs. lay down D.P.	
12/23	Ran 175 Jts., 5 1/2", 15.5#, J-55 new seamless csg. Placed Halco Recipo wall cleaners at 10 ft. interval from 5, 660' to 5,590', at 20 ft. intervals from 5, 170' to 5,130', 10 ft. intervals from 4,920' to 4,870'. Placed Howco centralizers at 5,745, 5,680, 5,620, 5,570, 5,510, 5,200, 5,100, 4,960, 4,900, 4,840. Ran csg. to T.D., broke circulation @ 3,000 ft., circulated at T.D. 1 hr. Picked up csg. 10 ft. to start,	

12/23

20 ft. scratching strokes, casing wouldn't go (cont'd) back down, circulated 30 minutes, casing wouldn't go back to bottom, cemented csg. 10 ft. off bottom, without attempting to scratch, with 175 sks. had full circulation while pumping cement, pumped plug down with fresh water. Bumped plug and released pressure three times. Float shoe wouldn't hold. Pressured up 500 psi on csg. Shut in, tore down Halliburton, cementing head started leaking badly, attempted to repair leak, no success. Rigged Halliburton back up. moved plug down 65 ft., held pressure on plug and kept water moving to avoid freezing for 4 hrs., gradually lowered pressure over next 4 hrs. Released Halliburton, landed csg. as cemented, cut off landing jt. Displaced top 10 ft. of fresh water with diesel oil to prevent freezing. Welded on Ball Nipple, capped well with plate welded over 5 1/2" collar.

#### 5 1/2" Casing Detail

Bottom Next Next	1.69 64.75 26.42 5,666.95	Halco float shoe w/automatic fillup assembly 2-jts. 5 1/2" OD 15.5#, J-55 casing 1 jt., 5 1/2" OD 15.5#, J-55 casing (short joint for perf. depth control) 172 jts., 5 1/2" OD, 15.5#, J-55 Csg.
Total	5, 759.81 8.12 5, 751.69	Cut off landing jt.  Casing landing depth KB

#### Cementing Detail

	No. Sacks	Туре	Fillup	Purpose
Bottom	30	Latex	180 ft.	To bond over pay sections
Next	50	Salt Saturated Poz- mix, 2% Gel	170 ft.	Cover salt and potential
Next	60	Salt Saturated 20% Diacel D	450 ft.	Economic light wt. filter to bottom of Heath
Next	35	Salt Saturated 50-50 Poz., 2% Gel	150 ft.	Cover Heath

For economic purposes, a caliper log was not run prior to running the casing. Hole sizes were estinated using two logs of recent wells drilled nearby, by Murphy Corporation. 500 gal. of mud flush was pumped at a low rate ahead of the cement. The cement slurry was pumped at a rate of 12 BPM. Top and bottom plugs were used. Washed up cementing equipment on top of plug to help in drilling plug during deepening.

#### SAMPLE DESCRIPTION

Heath	
4,822-27	Shale: Black, red, purple, limestone, multicolored
4,827-32	As Above
4,832-37	As Above
4,837-42	As Above
4,842-47	As Above
4,847-52	Sandstone: Red, hard to friable no flour, N/S (Sample flooded)
4,852-57	Sandstone: Red tr. white N/S, limestone white &
	gray, tr. black shale
4,857-62	As Above
4,862-67	Sandstone: Red & White fair flour in white sd.
	(sample flooded)
4,867-72	Sandstone: White hard to friable fair flour, red ss
	Н & Т
4,872-77	As Above
4,877-82	Sandstone: Red good flour, white ss fair flour
4,882-87	Sandstone: Red & White fair flour, white ss spotty
	flour & milky cut looks wet
4,887-92	As Above
- 4,892-97	As Above - increase in black & red shale
4,897-02	Black & Red Shale
4,902-07	Shale: Black & Red some white & red ss sli. flour
4,907-12	As Above
Kibbey	
5, 142-52	Shale: Black & Red, Sandstone: White, pink N/S
5,152-62	As Above
5, 162-72	Sandstone Red, hard to friable fair flour
5, 172-82	Sandstone: Red, hard to friable, dull spotty flour
	(sample flooded)
5, 182-92	Sandstone: Red dull spotty flour, tr. white ss N/S
5, 192-02	Sandstone: Red hard to friable, spotty flour
5,202-12	Sandstone: As above becoming tighter
5,212-22	As Above - increase in shale
5,222-32	Sandstone: Red, flour when crushed and cut
5,232-42	Shäle: Black & Red
5,242-52	Sandstone: Red sl. flour
5,252-62	Sandstone: Red & White very spotty flour
5,262-72	As Above
5,272-82	As Above

#### Workover Report

#### Huber Well No. 4A

January I3, 1967

Rigged up Western Rig. Pulled Rods & pump. Rigged up & pulled tubing. Had trouble breaking out tubing collars & slips not holding. Tallied tubing out of hole. Tubing tallied 5596.26' (without dual-production assembly) Made up Baker Retreivable Bridge Plug on single joint tubing (with retrieving head) & run in hole. Made up Baker Packer & run in hole & run tubing. Picked up (2) extra joints tubing & set bridge plug at 5645.73' G.L. Pulled back & set packer at 5575.17'GL. Open end tubing at5592.07 G.L. (opposite perfs.)

Pumped lease oil down tubing & filled casing (using Dowells pumps)

Pumped 750 gal. Dowell R-A-5 I5% acid W/7gals A-IIO inhibitor plus 2 gals non-emulsion agent down tubing & spotting at perfs. Let set for IO minutes. Set Baker packer W/20,000 lbs weight.

```
6:04 PM Started pumps
      175 lbs pressure: Flow rate .75 B.P.M. - 3 bbls in
6:I2
      Stopped pumps: 900 lbs. Flow rate .50 B.P.M. - 5 bbls in
6:I5
      Started pumps: @ 400 lbs.
6:I9
      850 lbs. pressure: flow rate .50 B.P.M. -
                                                     7 bbls in
      Stopped pumps
6:24
      Started pumps: 300 lbs pressure
6:30
      850 lbs pressure: flow rate .50 B.P.M. -
                                                    IO bbls in
      Stopped pumps
6:36
      Started pumps: 275 lbs pressure
      800 lbs pressure: flow rate I/3 B.P.M. -
6:45
                                                    I3 bbls in
      Stopped pumps
6:50
      Started pumps: 250 lbs pressure
      750 lbs pressure: flow rate .50 B.P.M. -
                                                    I6 bbls in
                            " .50 B.P.M. -
                         11
      725 lbs Pressure:
                                                    I8 bbls in
Start over flush with 6 bbls lease crude oil
& 7:I0 700 lbs pressure: flow rate .60 B.P.M. -
                                                     6 bbls overflush in.
```

#### Shut in:

I- minute drop 700 lbs to 500 lbs.

I5- minute drop 700 lbs to I00 lbs.

Leaving well shut in for over night soaking.

#### Swab test after Acid Job

#### Huber Well No. 4-A

January I4, I967

Rigged up swab & stripper. Opened tubing valve & had vacuum. Cracked casing valve & had a little pressure on back dide of packer. Started in hole with swab & was dropping slow for approx I20° & stopped. Pulled swab & had heavy paraffin load. Run swab again & stopped at approx i25°. Pulled swab. Heated 25 gals diesel & poured down tubing. Run swab & was dropping slow & then gradually picked up momentum. Hit fluid level at approx I600°

8:25 AM 8:38	Run swab. Hit fluid at approx I600' - run to 3600' Completed run 9 bbls fluid recovered
8:42 8:56	Hit fluid at 3000' - run to 4500'  Completed run 8 bbls fluid recovered
9:04	Changed swab cups Hit fluid at 3800' - run to 5775'
9:15	Hose end blew off & sprayed pickup & Ford tank truck
9:30	Rigged up another hose Replacement hose ruptured
10:10	Completed solid pipe hookup & run swab - Hit fluid at 4000
IO:25	Completed run 8 bbls fluid recovered
IO:3I IO:38	Run swab Hit fluid at 4500t - run to 5575t Completed run (show of spent acid) 7 bbls fluid recovered
II:02	Run swab- hit fluid at 4500° - run to 5575°
II:I4	Completed run (show of spent acid) 6 bbls fluid recovered
II:30	Run swab- Hit fluid at 4500' - run to 5575'
II:43 II:5I	Completed run (show of spent acid) 6 bbls fluid recovered Run swab- Hit fluid at 4500' - run to 5575'
I2:04	Completed run (less acid this run) 5 bbls recovered
12:13	Run swab- Hit fluid at 4500t - run to 5575t
I2:25	Completed run (small trace of acid) 5 bbls fluid recovered
56.50 -	Total bbls fluid used for acid treatment
	Total bbls fluid swabbed back by stock tank measurement.

#### Workover Report

#### Huber Well No. 4-A

January 14, 1967

After completeing swab test, rigged up & released Baker Packer & let un-loader equalize fluid. Picked up 2 joints tubing & dropped down & latched onto Baker Retreive-A-Matic Bridge Plug with retrieveing head & released B.P. Pulled tubing, checking periodically to make sure B.P. had not dropped off. Completed pulling tubing & dropped packer & bridge plug off.
Made up Baker dual-production assembly & run in hole. Run tubing and

landed. Made up well head & shut in for the night.

January I5, I967

Rigged up rod tools & made up pump. Scoped pump to make sure OK & run pump. Run rods, changing out severly worn rod boxes while going in hole. Landed pump & hung well on beam. Started unit & checked at well head & pump giving good blow. Unit run approximately I5 minutes & motor burned up. Suspected cause due to drifting snow entering housing & causing a short. Called Western service foreman to remove motor from Ft. Peck no. I unit & install but he said by the time he rounded up a crew, it would be dark so will have to wait until tomorrow.

January 16, 1967

Western service crew removed \$0 HP motor from Ft. Peck no. I unit & installed it on Huber 4-A unit. Disassembled motor as was completely packed with snow. I went to town & borrowed a portable air tank & blew snow from comentator & windings. Re-assembled motor but wouldn't run. Checked control box fuses & coil & OK. Checked fuses in breakaway switch & looked OK. Electrician was in field for Murphy & had to wait 2 hrs for him to check line voltage & found one leg dead. Discovered a fuse in breakaway switch was broken but had failed to see the break. Re-placed fuse & started unit. Had fluid up in I hrs. Pressure tested to 400 lbs & held.

#### Changed out:

(7I) 3/4" rod boxes

(I) 7/8" rod

(I) repaired 2½ "x I½ "x I6' OWS BHD insert pump

#### HUBER NO. 4A

#### WORKOVER HISTORY NO. 3

Lease and Well Number: Huber 4A

Field: East Poplar County: Roosevelt State: Montana

Well Location: NW NW Section 10, T28N, R51E

#### STATUS PRIOR TO PRESENT JOB:

Date of Last Workover: June 15, 1968 (Acidize) TD: 5788' KB Open

Hole PBTD: 4994 KB (RBP) Producing Zone: Madison B-1

Perforations: 5606'-13' KB Latest Test: Pumping 27 BOPD 77 BWPD

#### JUSTIFICATION OF WORKOVER:

Try to complete well in Heath Sand Zone.

#### SUMMARY OF WORKOVER:

- 11-17-69 Came out of hole with rods and tubing. Ran Baker Retrievable Bridge Plug and set.
- 11-18-69 Shot perforations 4870'-80', 2 shots/ft. w/4" DP Gun.
  Ran tubing and Baker Loc-Set packer without elements.
  Set tool and swabbed. Swabbed Madison oil and Water
  (load). Well not giving up fluid.
- 11-19-69 Swabbed well dry, pulled Loc-Set and ran Halliburton RTTS Packer to 4852' KB.
- 11-20-69 Tested RBP (held), set RTTS at 4852' KB, acidized Heath Sand Zone w/500 gallons MCA, Swabbed water to test tank, swabbed 10 BWPD.
- 11-21-69 Swabbed well to test tank. Well filled up to surface overnight, SITP 50#. Swabged well dry, swabbed 10-12 BWPH, trace of oil. Decided to temporarily abandon Heath Zone and put well back in Madison B-1.
- 11-22-69 Came out with Halliburton RTTS packer and ran back Baker Loc-SEt Packer. Set at 5883' KB. Flanged up well head and ran pump and rods. Hung on and commenced pumping Madison B-1 perfs, 5606'-13'. Will determine later if Heath Zone can be made productive. Rigged down and moved rig to Huber #1 for My-T-Frac.

#### RECAP OF WORKOVER:

Final Perforations: 4870'-80' (packed off); 5606'-13' (open)

Final PBTD: T.D. 5788' (45 Open Hole)

Initial Potential: 30 BOPD 77 BWPD

Geological Name of Formation: Madison B-1

Page 2 Continued Workover History No. 3

RESULTS OF WORKOVER:

Well apparently not commercial in Heath Zone. Put well back on production from Madison B-1 Zone. Heath Zone open to annulus to check periodically for Heath oil buildup.

Down Hole Equipment:
Casing 5½" 15.50 set at 5760'.

#### HUBER NO. 4A

#### WORKOVER HISTORY NO. 4

Lease and Well Number: Huber No. 4A

Field: East Poplar County: Roosevelt State Montana

Well Location: NW NW Section 10, T28N, R51E

#### STATUS PRIOR TO PRESENT JOB:

Date of last Workover: November 1969 TD: 5788'

KB: 5½" 15.5# casing at 5760' Model D at 5738' KB: 10'

Heath Perforations: 4870'-80'; B-1 Perforations 5606'-13' KB

Baker Loc-Set at 5591' (Packing off Heath Perfs)

#### JUSTIFICATION OF WORKOVER:

Perforate and test B-2 Zone 56261/2'-271/2'.

#### SUMMARY OF WORKOVER:

- 9-22-71 Rigged up start out with rods. Out with rods, rig up to pull tubing. Packer released, start out with tubing. Out with tubing, flange up shut in for night.
- 9-23-71 Rig up Wireline to perforate. Shot 4 holes, 5626½'-27½' 50 g. charge. Run in with Loc-Set and tubing. Bottom of packer set at 5620' KB, 20,000 comp. Start swabbing to tank. Well dried up in 5 pulls. Shut in for 1 hour. 100' fill up, probably lost on last run. No fluid entry into well. Shut down for day, will acidize in AM.
- 9-24-71 Rig up to acidize with 250 gallons 15% (see Dowell Report) acid in, rig to swab. Well dried up in 6 pulls. Shut in for 30 minutes. 100' fillup (acid water). ½ hour 100' fillup (acid water) well not giving up fluid. Start 750 gallon 15% acid in (see Dowell Report). Acid in, instant shut in (vacuum) Swabbed est 60 bbl fluid to seating nipple, (water). Shut in one hour 1200' fillup (acid water). In one hour 1000' fillup (acid water). SDFD.
- 9-25-71 Fluid level 1200'. Swabbed dry 100% water. Took out 6' pup joint, put 26,000# tension on Loc-Set. Rig to run rods and 1½" pump to pump test well. Hung well on and started unit.

#### HUBER NO. 4A

#### Workover History No. 5

Lease and Well Number: Huber No. 4A

Field: <u>East Poplar</u> County: <u>Roosevelt</u> State: <u>Montana</u>

Well Location: NW NW SEction 10, T28N, R51E

#### STATUS PRIOR TO PRESENT JOB:

Date of Last Workover: November 1971 TD: 5788'

KB:  $5\frac{1}{2}$ " 15.5# casing at 5760' Model D at 5738' KB: 10'

Heath Perforations: 4870'-80' B-1 Perforations 5606'-13'

B-2 Perforations 5626½'-27½' Open HOle 5760'-88'

#### JUSTIFICATION OF WORKOVER:

Bridge off B-2 Zone and Open Hole as they are producing 100% water.

#### SUMMARY OF WORKOVER:

- 9-12-73 Rig up, pull rods and pump. Shut down for day.
- 9-13-73 Rig to pull tubing. Release packer and start out with tubing. Out with packer, put on CIBP and setting tool. Start in with CIBP. CIBP set at 5618', start out of hole. Out with setting tool. Start in hole with Loc-Set Packer. In with packer, flange up well head, shut down.
- 9-14-73 Dowell and water truck on location, wait on crew. Crew on location, rig to acidize. Start to spot acid via tubing. Acid at end of tubing, set packer. Acid in formation with 15 bbl over flush. 15 min. shut in 1000#, land tubing with 25,000# tension. Rig to swab, start swabbing fluid from surface. Swabbed 65 bbls fluid from well, fluid level staying at 3000'. Swabbed water, then acid water, then oil and salt water. Rig to run rods. Rods in, pump seated, well took 15 minutes to pump up. Released rig.
- 9-18-73 Tested well, well making 139 bbls fluid 20 bbls oil.

#### Recap of Workover:

Final Perforations: 4870'-80' Heath; 5606'-13' B-1;

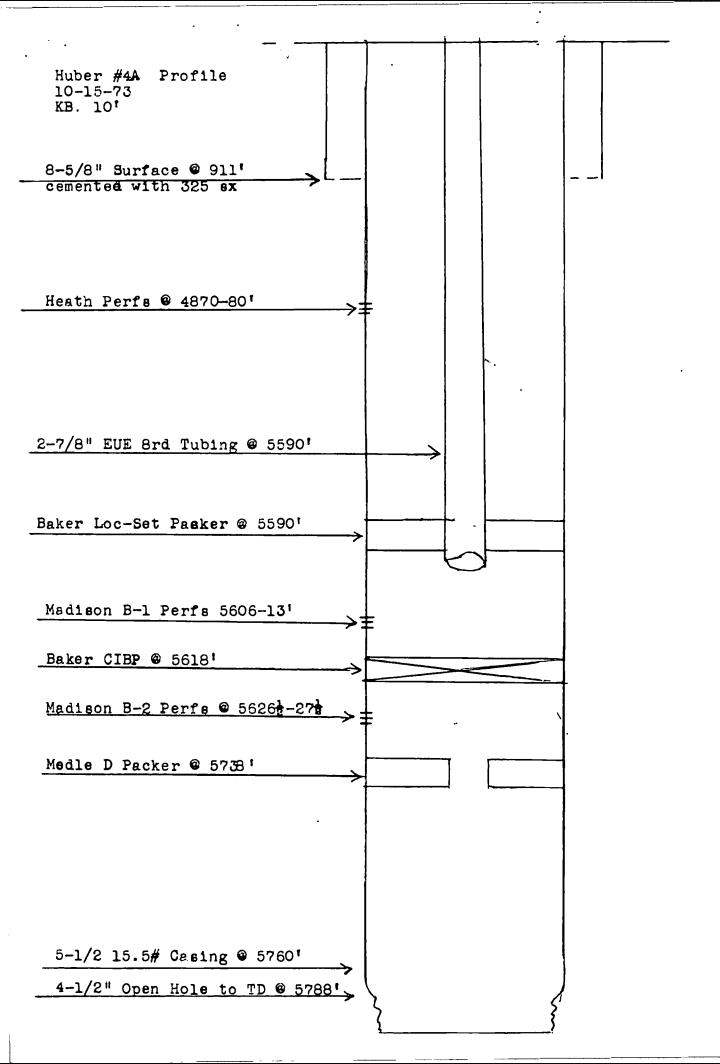
Final BPTD: 5618' 5626½'-27½ B-2 Heath packed off below with Loc-Set Packer. B-2 and open hole bridged off with CIBP.

Initial Potential: 20 bbls oil 119 bbls water.

Geological Name of Formation: Madison B-1

#### Results of Workover:

No change in previous production, may need more acid.



#### HUBER 4A

#### WORKOVER HISTORY NO. 6

Lease and Well Number: Huber No. 4A

Field: East Poplar County: Roosevelt State: Montana

Well Location: NW NW Section 10, T28N, R51E

#### STATUS PRIOR TO PRESENT JOB:

Date of Last Workover: September 1973 TD: 5788'

KB: 55" 15.5# casing at 5760' Model D at 5738' KB: 10'

PBTD: 5618' Perforations: 4870'-80' Heath, 5606'-13' B-1,

5626½'-27½' B-2, Open hole 5760'-88'

#### JUSTIFICATION OF WORKOVER:

This well is pumping drilling mud and a casing leak is suspected. It is proposed to find the leak and cement squeeze.

#### SUMMARY OF WORKOVER:

- 8-16-95 MIRUPU POH rods and tubing. Well flowing drilling mud. Shut down wait on orders.
- 8-17-95 Pick up retrievable bridge plug and full bore packer. TIH set bridge plug at 4802'. Pressure test bridge plug. Start out of hole testing for casing leak. Found casing leak at 1,300'. Retrieve bridge plug and reset at 2491'. Shut down waiting on cement.
- 8-18-95 Put on B.O.P. spot 3 sacks sand on bridge plug. Test bridge plug to 2000#. Holes in casing from 1300' to 121'. Shut down.
- 8-19-95 Bleed well off. Unflange and remove casing head. Pick up casing elevators and make up sub on casing. Casing cemented in, flange up casing and cap well off. Shut down for the day.
- 8-20-95 Sunday no work.
- 8-21-95 Run packer and tubing into hole. Lay down 22 stands tubing circulate packer fluid, set packer and flange up well head. Run pump and rods into hole. Lay down 24 3/4" rods and 5 7/8" rods. Put well on production. To windy to rig down.
- 8-22-95 Rig down and move off.

- Page 2 Workover History No. 6 Huber 4A
- 8-28-95 Move in rig. To windy to rig up. Move mud pump and drilling equipment to location.
- 8-29-95 Rig up P.O.H. rods and tubing. Pick up sub and bit and run in hole. Tubing tagged bottom at 5498'. Rigged up pump and swivel and cleaned hole to top of bridge plug 5618'. Circulate hole 1/2 hour. Shut down for day. Packer rubbers bad ordered new packer.
- 8-30-95 Circulate hole 1/2 hour. Rig down swivel. Pull tubing, lay down bit and sub. Run in hole perforated nipple and mud joint, bull plug and seat nipple and 28 stands tubing and packer plus 152 joints tubing. Circulate hole with packer fluid. Set packer, run rods and pump. Pump would not go through packer. Pulled pipe out and shut down.
- 8-31-95 Run in hole with packer and tail pipe. Tag bridge plug and circulate hole. Pull and lay down 27 stands stubing, circulate packer fluid and set packer at 4780'. Run pump and rods and put well on production.

LEASE Huber	WELL NO. 4-A
LOCATION NW NE SUL. 10, TZEN-RSHE	FIELD Fust Poplar
COUNTY Roosevelt	STATE Mondanu
COUNTY	TD 5795' KB 2091'
	DF GL 2079'
	DI
85/8" SURF. CSG.	
	COMPLETION INTERVALS:
a <u>9//</u> with	
41 /460)	
Heath (11/69) = (4870 - 80')	
	WELL HISTORY:
	Drilled + Completed (12/65)
	Drilled + Completed (12/65) IPid @ 41 BOPD, 52 BWPD
	on rod pump.
	on 100 pomp.
= "B-1" (5606-13") (12/65)	)
CIBP @ 5618'	
# B·z (5626·27) (9/71)	
Boker model "0" @ 5738	
$2 \frac{5 \frac{1}{2}}{100} \cos a \frac{5760}{100}$	
W/ 175 SXS. 15.5 #144	
Madison" (" (12/65)	REMARKS:
41/2" open how completion do 5788'	

TUBING STRING DATA   TUBING STRING DATA   TUBING STRING DATA   TUBING STRING DATA   FOURTH   SIZE   FLORING STRING DATA   FOURTH   SIZE   FLORING STRING DATA   FOURTH   SIZE   FLORING STRING DATA   FABRES   FLORING STRING DATA   FLORING STRING DATA   FABRES   FLORING STRING DATA   FLORING STRING STRING DATA   FLORING STRING DATA   FLORING STRING DATA   FLORING STRING DATA   FLORING STRING STRING DATA   FLORING STRING STRING DATA   FLORING STRING STRING DATA   FLORING STRING DATA   FLORING STRING STRING DATA   FLORING STRING DATA	
TUBING STRING DATA  FOURPMENT SIZE LUE PLAIN HIREADS RANGE NUMBER FEET TENTHS SIZE RANGEN BOX PIN ROOT UNICERS  Tubing 2 7/8 EVE 8rd, 1 5553 1.1/8"  Tubing 2 7/8 EVE 8rd, 1 5522 1"  Tubing 2 7/8 EVE 8rd, 1 5518 7.8" GO  Soating Ripple 2 7/8 EVE 8rd, 1 5487 3.4" 156  Fubing 2 7/7 EVE 8rd, 177 58"  Fubing 2 7/8 EVE 9rd, 177 58"  Fubing 2 7/8 EVE 9rd, 177 58"  Fubing 2 7/8 EVE 9rd, 178 Fubing 2 7/8 Fub	REW DEP
Tubing 2 7/8 EME 8rd, 1 5553 1-1/8"  Tubing 2 8/8 EUE 8rd, 1 5518 7 8" 60  Tubing 2 7/8 EME 8rd, 1 5518 7 8" 60  Scating Nipule 2 7/8 EME 8rd, 1 5437 5/8"  Tubing 2 7/8 EME 8rd, 1 5518 7 8" 60  Tubing 2 7/8 EME 8rd, 1 5437 5/8"  Tubing 2 7/8 EME 8rd, 1 5518 7 8" 60  Tubing 2 7/8 EME	REW DEP
Tubing 2 7/5 EVE 8rd, 1 5522 1"  Tabing 2 7/8 EVE 8rd, 1 5518 7 8" 60  Soating Nipole 2 7/8 EVE 8rd, 1 5437 3.4" 156  Soating Nipole 2 7/8 EVE 8rd, 1 5437 5.8"  Tubing 2 7/7 EVE 8rd, 1 5437 5.8"  Tubing 2 7/7 EVE 8rd, 1 5437 5.8"  Tubing 2 7/7 EVE 8rd, 177 5.8"  Tubing 2 7/7 EVE 8rd, 1 5437 5.8"  Tubing 1 5437 5.8"  Tubing 2 7/8 EVE 8rd, 1 5518 7.8"  Tubing 3 7/8 EVE 8rd, 1 5518 7.8"  Tubing 2 7/8	
DOWN NUMBER   STATE	
Thising 2 9/8 EVE Srd. 1 5508  Goating Nipple 2 7/8 EVE Brd. 1 5497  Tubing 2 7/- EVE Brd. 1777  This pony  The property of the core previous sp.m.  The property of the core property	
Tubing 27/ EUE Brd. 1 5487 156  Tubing 27/ EUE Brd. 177  The state of	-
Tibing 27/ EUE Erd. 177    PUMP NUMBER   SIZE   SIZE   SIZE	
DOMP NUMBER  P-6  ISI Axcladit  PHEVIOUS P.M.  STAXIO  O.O. Brm. Cup  PHEVIOUS P.M.  ISI Axcladit  P-8  PLUMER SIZE AND TYPE  ISI Axcladit  TYPE  SIZE  PHEVIOUS P.M.  INBC  I	-
DOMP NUMBER  P-6    ISI Axcitain   Type   Size   Store   Size   S	
P-6 ISI Axcison PREVIOUS 5 P.M.  S' Axito O.D. Bon. Cup 11 64  PLUNGER SIZE AND TYPE INTERPRETATION TO PREVIOUS 5 P.M.  PUMP NUMBER P-8 ISI Axcison IVPE ISI Ax	
P-6 ISI Axe Hall PREVIOUS 5 P.M.  S' Axito O.D. Bim. Cup 11 64  P-8 ISI Axe Hall PREVIOUS 5 P.M.  INBC 22 x 17 x 19  ENGLY STOCKE  PUMP NUMBER P-8 ISI Axe Lon Type  INBC 22 x 17 x 19  ENGLY STOCKE  PUMP NUMBER SIZE AND TYPE  INSI Axe Lon Type  INBC 22 x 17 x 19  ENGLY STOCKE  PUMP NUMBER SIZE AND TYPE  INBC 22 x 17 x 19  ENGLY STOCKE  FINANCE SIZE AND TYPE  INPRESSION SIZE  IMPRESSION SIZE  IMP	
PUMP NUMBER  P-6  ISI Axcison  IVPE LOCK  PLUNGER SIZE AND TYPE  SIZE  PUMP NUMBER  P-8  ISI Axcison  INBC  PUMP NUMBER  P-8  ISI Axcison  INBC  PUT WELL ON AM S.P.M.  PM 11  BAILER SIZE O.D. TYPE AND LENGTH  BAILED FROM  IMPRESSION  IMPRESSION SIZE  IMPRESSION	
P-6 ISI Axcinati PREVIOUS 5 P.M.  START O.D. BUT. Cup 11 64  PUMP NUMBER P-8 ISI Axcinati PREVIOUS 5 P.M.  INBC 11 64  PUMP NUMBER P-8 ISI Axcison IVPE SIZE  PUMP NUMBER P-8 ISI Axcison IVPE SIZE  PUMP NUMBER SIZE AND TYPE ISI Axcison IVPE LOCK PUT WELL ON AM S.P.M. PM 11 64  PUMP NUMBER SIZE AND TYPE ISI Axcison IVPE LOCK PUT WELL ON AM S.P.M. PM 11 64  IMPRESSION SIZE  IMPRES	
P-6 ISI Axcinal PHEVIOUS 5 P.M.  PLUNGER SIZE AND TYPE  SIZE  PUMP NUMBER  P-8 ISI Axcison  INBC  PUT WELL ON AM S.P.M. PM 11 6.  BAILER SIZE O.D. TYPE AND LENGTH  BAILER SIZE	
S' Axito O.D. Btm. Cup  PUMP NUMBER  PROBLEM SIZE AND TYPE  PUNGER SIZE AND TYPE  PUNGER SIZE AND TYPE  PUNGER SIZE O.D. TYPE AND LENGTH  BAILED FROM  TO  FLUID  LEVEL  FT. PM  FT.  IMPRESSION  BLOCK  PM  IMPRESSION  BLOCK  PM  PM  PM  PM  PM  PM  PM  PM  PM  P	.16
PUT WELL ON AM S.P.M.  PM 17  BAILER SIZE O.D. TYPE AND LENGTH  BAILED FROM TO  FLUID  WATER  LEVEL  FT. AM  FT  WATER  LEVEL  FT. PM  FT  IMPRESSION  BLOCK  PM  PM  PM  PM  PM  FT  COM- PM  PM  PM  PM  PM  PM  PM  PM  PM  P	
BAILER SIZE O.D. TYPE AND LENGTH BAILED FROM TO FLUID  HIS.COVERED  WATER LEVEL FT. AM PM FT  IMPRESSION SIZE STOPPED AT  OIST GUMBER  RIG HOURS INVANIL TOLE SWED LINE CREW ON AM CREW OFF AM NO. OF MEN MAN HOURS ON PM	
THE COVERED  WATER LEVEL FT. PM FT  IMPRESSION SIZE STOPPED AT  BLOCK  FOIST HUMBER  RIG HOLD LONG SANDLEN CHEWON AM CREWOFF AM NO. OF MEN MAN HOURS PM P	64
IMPRESSION SIZE STOPPED AT BLOCK STOPPED AT BLOCK STOPPED AT PM	
HOIST HUMBER BIG HOLD THE SANDLAN CHEWON AM CREWOFF AM NO. OF MEN MAN HOURS COM-	
PM PM I PEETED L	NOTO
amp. Parfin problem shut down for the day. Rig cost. \$337.50  -13-84 Uncap well and wait on hot oil truck to hot oil well. Pick on up pump and Elli with and rods. Change out Un 3/4 rods hoxes. Space out pump and hans well on. Temp well up to all good. Rig down rig and move off location at 1:00 pm. Rig cost \$797.50  Bot Oil truck cost. \$340.30	

REATMEN		RT D IN U.B.A.		. (	^. <b>/ELL</b> ∩IV		WELL XXX CHEMICAL (	OMPANY	(		DATE	15	-68
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3ACK					BERVIC	E DANKHOW			ALLO	OWABLE	DAYS	TEST	ALLOWABLE

ว่ากับ LA	Tion	TREATM	MENT R	EPOJ		<	DOWELL			( )		DATE			
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ALL DATE	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	CUSTOME	R REP. CO	NTACTED			TISFACTORY SATISFACTORY	PROD. BE	PORE T	REATME	NT	PROD. AFT	ER TREA	TMENT	ſ
BACK					SERV		KHOWH	TEST		Al	LOWABLE	OAY5	TEST	ALL	OWABL

SERVICE AND INVOICE NUMBER 14 2.7/1 TERMS: NET 30, ADD LEGAL INTEREST THEREAFTER.

∫ Please indicate on all remittances and send to: 1579 EAST 21 STREET TULSA, OKLAHOMA 74114 SERVICE ORDER RECEIPT

SHIPPED VIA SERVICE FROM DOWELL STATION CUSTOMER ORDER NO. Dave-11 ElEgitiCE. WELL HAME AND NUMBER SERVICE ORDER 10-328-517 IMPORTANT, SEE OTHER SIDE FOR TERMS & CONDITIONS COUNTY, CITY (IF WITHIN CITY LIMITS) & STATE I have read, understood and agreed to the terms & conditions printed on the reverse side hereof and represent that I have full outhority to accept same and sign this order. ADDRESS DEX.15-56.26/27/27/2/1/2 will SERVICE INSTRUCTIONS: Unit Price ITEM NO. TINU YTITHAUQ AMOUNT Moterial, Equipment and Services Used 315.00 3/5.10 45 X 1111 4 160 26,25 .3 55 SUB TOTAL Gallons License Fee Gallons License Foo RECEIPT: THE UNDERSIGNED HEREBY CERTIFIES THAT THE MATERIALS AND EQUIPMENT LISTED ABOVE WERE RECEIVED AND THE SERVICES WERE PERFORMED IN A WORKMANLIKE MANNER. Tox on \$ Tox on \$ CUSTOMER TOTAL DWL-260-J PRINTED IN U.S.A. AUTHORIZED AGENT



WELL DIVISION OF THE DOW CHEMIC AL COMPANY

SERVICE ORDER RECEIPT

SERVICE AND INVOICE NUMBER

TERMS: NET 30. ADD LEGAL INTEREST THEREAFTER.

Please indicate on all remittances and send to: P.O. BOX 21

TULSA, OKLAHOMA 74102

SHIPPED VIA SERVICE FROM DOWELL STATION OUTPOST CUSTOMER ORDER NO Dowell 4/1/15/2009 LOCATION AND POOL AND NUMBER SERVICE ORDER IMPORTANTI SEE OTHER SIDE FOR TERMS & CONDITIONS.

I have read, understood and agreed to the terms & conditions printed on the reverse side hereof and represent that I have full authority to accept same and sign this order.

CUSTOMER COUNTY CITY (IF WITHIN CITY LIMITS) & STATE TYPE OF SERVICE & News CUSTOMER'S NAME ADDRESS CITY STATE & ZIP CODE **ERVICE INSTRUCTIONS:** ITEM NO QUANTITY UNIT Material, Equipment and Services Used Unit Price AMOUNT SUB TOTAL Gallons License Fee Gallons License Fee THE UNDERSIGNED HEREBY CERTIFIES THAT THE 96 Tax on \$ MATERIALS AND EQUIPMENT LISTED ABOVE WERE RECEIVED AND THE SERVICES WERE PERFORMED IN A WORKMANLIKE MANNER CUSTOMER 96 Tax on \$ 64759 TOTAL 5 260 K PRINTED IN U.S.A. AUTHORIZED AGENT



#### SALES DELIVERY TICKET

No.

698406 L

12-22-65	USTOMER'S	ORDER NO.	CUSTOMER'S REQ. NO.	SEC.	TWP. RNG	Co C				OF CHARGES		Halliburton
WELL NO. AND FARM			PLACE OR DESTINAT				00	UNTY		STA	TE	
Huber #4			N. Popl	ar				Roose	velt	1	ont	
TYPE 1.   Workover		whining	OWNER				CON	TRACTOR	w 0.			
WELL 3.   Developme	nt 4. 🗆 C	Ther	B.A. Polumbu	15		-		DELIVER	nl Ri	lg 13		
Duncan Use Only						Cust. Req.O			,	lumbus		
88						0 1		RECEIVE				
=						D 3		5 0	B	1.	-1+	
123						500	ther	We certif	y that the	Fair Labor Sta	ndards Act	of 1938, as amend-
2						No. C	opies	with resp	ect to set	rvices furnished	covered by	of goods and/or this invoice.
CHARGE B.A	. Polum	bus						TERMS	:	Due by the		
			n					2	Cont	month fro		
ADDRESS 220	C.A.	Johnson	bldg					\$	Inter	discount allower rest charged after adjustment may	60 days fro	m date of invoice.
STATE Deg	ver 2.	Colorad	0					\$	2	D O	NOT	USE
							6	Regari	Valpor			
Price Ref. No. & Part N	o. Size	Thds.	DE	SCRIPT	ION	Dr	11	/ respect	Issue		CODE	
REF. NO.						Illan	M,	W. 7		11.		
807.4006	511		Recipo Hall Cl	eaner	An B	1116	10	11/	6.0	4.85		
NEF. NO. 655	1"				MIA	1 110		10		200		
807,6056	5311		L. C. Lok Clamp	3	10/11	3		_	en	2.05		
REF. NO. 650	511	- :	22 - 450	11.11	D			10		16.60	2	49.00
807.705 REF. NO. 12A	<u></u>	-	S.A. Contrall	B. n	4			-	61	16.60		11.00
846.505	51"	8rd	3 0 12 W	+ 0	noe			1				65,00
REF. NO. 26	- 12	Cara	9. 110 LI	ost S	108			1	60			
846.5053	51.11	Mar	De Assembl	v				1	63			12.50
REF. NO. 35	-	71/7/	Jen 1 month	,				1	- Wat			
890.10802		11/1/2	Halliburton ich	w Wel	1 1				lbs			11.00
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REF. NO.												
SALESMAN			1	SALESMA	N'S EMPLOY	EE NO.		-				
Yale,	R.L.			80	947							
DELIVERED FROM												
G1 end	ive, No	ntana						_				
650	ODE		WHSE. CODE									

Customer's Copy

PRINTED IN U.S.A.

698406 **L** 



## CONTRACT 'ND TICKET

No. 147326 A

FORM 98	4-RD											
DATE		CUSTO: REQ. N	MER'S ORDER & O.	SERVICE TICKET NO.	SEC. TWP.	HNG.	TRK. CAL	LED OUT OF	1959793-	OB STARTED	JOB COMPLIATE 19/23/	DATE
12/22/	165			223112.		1	4:00		100 P.M.	7:30	10:00	A.M.
	AND PARM	<u> </u>		PLACE OR DESTINATION	v	· · · · · · ·	<u> </u>		COUNTY		STATE	
#4 Bul	Per			N. Poplar					Roosevelt	<u>.                                    </u>	Mont.	
	□ WONKO		EXPLORATE	ORY OWNER					CONTRACTOR			
WELL 3	DEVELO	PMENT 4	OTHER	XXXXX B. A.	Polumbr	18		DELIVERED T	Signal Dr	lg. Co.		
칕									-			
9							-	PREPARED B	Polumbus	···-		
Duncan Use Only									. Hickman			
질				•			<del> </del>	ACREED TO A	ND RECEIVED BY			
2							- 1	ZZ.C	-Barr	Luxuril.	~	
CHARGE			· · · · · ·					DELIVERED F				
то	B. A.	Polum	bus					Oler	dive. Eont			
MAILING	•		•				Ι,	TERMS:	DUE BY THE 2011 CHARGED AFTER	60 DAYS FR	ING MONTH, IN OM DATE OF IN	ITEREST IVOICE
ADDRESS	220	C. A.	Johnson	Fldg.				\$	Cash discount allo	wed if paid with	in this period.	
CITY & STATE	n		Colorad	_			!	\$	Tax adjustment ma		f discounted.	
WT. TKT.	TRUCK	CONVOY	OUANTITY*	<u></u>	BRAND	AND	TYPE			UNIT	AMOUNT	
NO	NO.	NO.	<u> </u>					<del>-</del>	,	;		Ī
8012	7936	2779	60	Ideal Class "G"	Cement	f/Tr	ident,	Mont.	•	1.60	96	00
			69	cu. ft. Macel	"D" mixe	ed 20	\$ w/60	o sks.		10/	67	69
			30	Hi-sol Drlg. Sa	lt mimed	1 50%	per	sk. w/60	) ska.	1.90	57	00
				35 cm. ft. Pozm	ix Cemer	it co	nsieti	ing of:				
			,,,							1/1	27	, ,
	<u> </u>		17	Ideal Class "G"	Cement	I/IT	loent,	Mont.	<del></del>	160	2/	ن نو
			18	Pozmix "A"					<b>'</b> .	1//3	19	34
				Halliburton-gel	Allow ed	1 2⊈ ,	w/35 ,	sks -		NC		<del>                                     </del>
				Ri-sol Drlg. Sa					5 ska.	190	/3	ى ك
SACKS U	INLESS VISE INDIC	ATED		ARGE ON MATERIALS RETU					атіми			
We certify	that the	Fair Labor							100		/	4-7
od, has b	een compli	, as amend- od with in		ARGE	_,		100		STINU G	35	63	70
with respec	ct to service	oda and/or m furnished	MILEAGE	TOTAL	. 117	LOA!	M PLANT	.s	TON	19	ب	ار ا
PRINTED	this invoice IN U.S.A.		CHARGE	13.500 WEIGH	11/6	TO V	WELL/2	<u>a</u>	MILES	1//	133	8%
contract,	whother th	agreed and	d understood t	MITATIONS COVERING THe that in the sale and deliver seterials be blonded or other	ry of the mat	torials co	ovorod by okos no re	this	su	BASTAL	500	1
Ho	lliburton v	varrants th	at the produc	ept as follows: ts and materials sold to th						TAX		
OF	for dama	ges of any	kind resulting	at the liability of Halliburto from the negligence of H	ialliburton sho	of such w	rarronty mited to					
ond such	express w	orranty is	in lieu of all	of credit for such materic warranties, express or im	pilod, and Ho	lliburton	shall na	ot bo		TAX	<u></u>	
except wh	any chan era a chi	ges or mo	difications wit odification is	h respect to such liobility and mode by a duly authorize	os imposed or ed executivo	n It by i officer o	such warr of Hallibu	urton		TOTAL		



# CEMENTING SERV' T

No. 223162

12/53/2	- CL	STOMER	S ORDER	NO.   CUSTOM	ER'S REQ.	NO. SEC.	TWP. R		1/100 P.M.		7:30 A.M		DATE
WELL NO. AN	ND FARM			PLACE OF	DESTINA	TION			7	YTHUC	STAT	E	
# 4	HU	ber.		Po	Pla	1	MON	7		800508	IT D	THO	
TYPE 1	Works		2 🗆 E		WNER	_	.,	-		CONTRAC	TOR		
WELL 3					E.A.	Pol	um	bus		5191	721 .Dr	19.60	
7							Cus.	Inv.	CHARGE TO			/	
5							Ori	g. &	E.A F	OlUM	bus.		
88							8		CITY AND STATE				
Duncan Use Only								3	Denver	, 2. Co	10		
2							8	Other	MAILING ADDRESS		-		
2								oples	220 C.A.	Tohn	502, 81	19	
	Owner.	Operator	or His A	Locat States H	e Well I	s in Condition		OR OTHER DESIGNATION OF THE PERSON NAMED IN	Job to Be Perfor		ts the Following D	ata:	
TYPE OF				ASING		E DATA	TUBING	OR DR	LL PIPE CEMENT	TING PACKER	l luni uni		
SURFACE			NEW	-	BORE	-7.			SIZE	1	MAKE FLOA	T EQUIPME	NT
INTERMEDIA	TE	_		_	SIZE	1/8	SIZE		3125	alla	FLOAT COLLAR		
PRODUCTION	N		USED		TOTAL					do lin	GUIDE SHOE	,	
SQUEEZE			SIZE	5/2	DEPTH	5,760	TYPE		1111/20	Mo	FLOAT SHOE	2100	
PUMPING			WEIGHT	In TOS	ROTARY	/	T	_	THE THE WATER	4	OTHER E	QUIPMENT	
PLUG BACK			DEPTH	131800	ROTART		WEIGH	an	1111 Burgan		17 R.W	6)	
GROUTING				5,757	CABLE		TOTAL	WAX	DEPTH		10 E.Z L	oks/to	12/60
Other (write	in)		TYPE	7,33	TOOL	6	DEPTH	11/11/	SET		10 CENT	- )	
		SQUEE	ZE OR P	LUG BACK DA	TA	Ma	11 ,	0 -	1	CEMENT E	ATA	48 /	- 111
PURP	OSE	Depth	From	To Approx.	CASIN	MA SYSA		ACKS	TYPE	KED?BR.	Mixed Wt. Po	or Goldens	dmix
WATER					200	Millia			1			9011 4	2 2
WATER		-	-		112	) ~		0	Keg	Type			
GAS				2pp	110		6	0	//	11	2070 016	ce15,5	
ABANDON			A	17/110			8	5	POZ		25	25.5	
			A ON SE	RVICE OPERA					INIVO	ICE S	ECTION		
BATTON 81	PLUGS A			//	PRES		DERT	H OF JO		ICL 5	FT.		
BOTTOM PL	UG YP	<i>y</i> -			LATING	400		CE REF.		AND RENTAL		AMOU	NT
TOP PLUG	FL	F . 0	TYPE /	MINI		200	0					#	
TYPE HEAD	3/2	VO. 1.	<u></u>	MAXI	MUM	4600	100	1/03	BASE CHAR		FT.	528	-
CEMENT LEF			,,,,	SURED WITH	LINES	FT.		,	800	FT.	Per Ft. 100' or Fraction	95	20
TRUCK NO		HECESSI	LOCATIO		LINEI	NAME		/				~.	-
	,	1	_	Cementer	( D				EXTRA TRU	CK			
7929	1581	710		Driver	DI	TOWR	-		STAND BY T	RUCK			
11011	58.C	110	Udh	Cementer	UIEP	1643016	0 -		- 0 1/0	10 -		0	
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and to enable	us to keep	our stands	ard of serv	ice up to the hi	thest point		TER	MS-N	NET, PAYABLE	BY 20th	SUB-		
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Farlad	100	white	1	199000	Berd	lu	This	la to cer	tify that the Fair L. amended, has been	abor Standards	100		
T THE STATE OF	150	2	3-1	A co L	100	/	in the	e product	tion of goods and/o furnished covered h	r with respect	1		-
		WNER.	OPERATOR	OR HIS AGEN	T		7		PRINTED IN U.S.A.		TOTAL		



### WORK ORDER CONTRACT. AND PRE-TREATMENT DATA

INVOICE & TICKET NO. 74022

Glandive Montanz DISTRICT YOU ARE HEREBY REQUESTED TO FURNISH EQUIPMENT AND SERVICEMEN TO DELIVER AND OPERATE TO: HALLIBURTON SERVICES THE SAME AS AN INDEPENDENT CONTRACTOR TO AND DELIVER AND SELL PRODUCTS, SUPPLIES, AND MATERIALS FOR THE PURPOSE OF SERVICING 10 Huber WELL NO. \_LEASE. COUNTY KOOSOVOLT STATE MONTEN & \_OWNED BY\_ ĖΙELD. THE FOLLOWING INFORMATION WAS FURNISHED BY THE CUSTOMER OR HIS AGENT MAX. ALLOW. TO WEIGHT FORMATION TYPE Sand FORMATION THICKNESS CASING 5 1/2 15.5 FROM 4870' TO 4896' 0 5760 1000 LINER PACKER: TYPE 270 TUBING 6.5 **L**8 5 2 2500 TOTAL DEPTH MUD WEIGHT SHOTS/FT. OPEN HOLE BORE HOLE PERFORATIONS 4870 4880 BPD. H2O\_\_\_\_ INITIAL PROD: BPD. GAS PERFORATIONS PRESENT PROD: \_ BPD, GAS \_ \_ BPD. H2O \_\_\_ PERFORATIONS PREVIOUS TREATMENT: DATE MATERIALS TREATMENT INSTRUCTIONS: TREAT THRU TUBING 🎖 ANNULUS 🗌 CASING 🗍 TUBING/ANNULUS 🗎 HYDRAULIC HORSEPOWER ORDERED Pat Bridge Test BEKEY Herth CUSTOMER OR HIS AGENT STATES THE WELL IS IN PROPER CONDITION, TO RECEIVE THE PRODUCTS, SUPPLIES, MATERIALS, AND SERVICES THIS CONTRACT MUST BE SIGNED BEFORE WORK IS COMMENCED As consideration, the above-named Customer agrees: (a) To pay Halliburton in occord with the rates and terms stated in Halliburton's current price lists. Halliburtan shall not be responsible for and Customer shall secure Halliburtan against ony liability for damage to property of Customer and of the well owner (if different from Customer), unless caused by the willful misconduct or gross negligence of Halliburtan, this provision applying to but not limited to subsurface damage arising from subsurface damage. Customer shall be responsible for and secure Halliburton against any limbility for reservoir loss or damage, or property damage resulting from subsurface pressure, losing control of the well and/or a well blowout, unless such loss or damage is caused by the willful miscanduct or grass negligence of Halliburton. Customer shall be responsible for and secure Halliburton against any and all liability of whatsoever nature for damages as a result of a subsurface tresposs, or an action in the nature thereof, arising from a service operation performed by Halliburton hereunder. Customer shall be responsible for and secure Halliburton against any liability for injury to or death of persons, other than employees of Halliburton, or damage to property (including, but not limited to, injury to the well), or any damages whotsoever, irrespective of cause, growing out of or in any way cannected with the use of radioactive material in the well hale, unless such damage shall be caused by the willful misconduct or grass negligence of Halliburton. Halliburton makes no guarantee of the effectiveness of the products, supplies or materials, nor of the results of ony treatment or services. At Customer's expense, to recover any Halliburtan equipment, tools or instruments which are last or damaged in the well, and if recovery cannot be had, to pay Halliburtan for such equipment, tools or instruments unless such loss or damage is coused by the negligence of Halliburtan. Halliburian warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. There are no warranties, express or implied, of merchantobility, fitness or otherwise which extend beyond those stated in the immediately proceeding sentence. Halliburton limits its liability for broach of any warranty or for damages resulting from its negligence with respect to the use of such products, supplies or materials to the replacement of such products, supplies or materials on their return to Halliburton, or at Halliburton's option, to the allowance to Customer of credit for the cost of such products, supplies or materials. Upon Customer's default in the payment of Customer's account 60 days after receipt of invoice, such account will be subject to interest after date of invoicing until paid. In the event it becomes necessary to employ on attorney to enforce collection of such account, Customer agrees to pay all collection casts and attorney fees in the amount of the unpaid account. Halliburion shall not be bound by any changes or modifications in this contract, except where such change or modification is made in writing by a duly authorized executive officer of Holliburton. I HAVE READ AND UNDERSTAND THE THAT I AM AUTHORIZED TO SIGN THE S. CONTRACT AND REPRESENT 000 CUSTOMER

CUSTOMER

We certify that the Fair Lobor Standards Act of 1938, as amended, has been complied with in the production of goods and/or with respect to services furnished under this contract.

11-19-69

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#### WORK ORDER CONTRACT AND PRE-TREATMENT DATA

ATTACH TO	NO.	74021

DIS	RICT Glending Montana					DATE	11- 20	- G9
TO:	HALLIBURTON SERVICES YOU ARE HEREBY REQU	JESTED TO F	URNISH E	QUIPMENT A	ND SERVI	CEMEN TO	DELIVER AN	D OPERATE
	THE SAME AS AN INDEPENDENT CONTRACTOR TO:	lumbu	s. Co	r P				
	AND DELIVER AND SELL PRODUCTS, SUPPLIES, AND MATERIAL	S FOR THE	PURPOSE	OF SERVICE				
·WPI	LNO. # 4- P LEASE HUBET		SEC.	10	TWP.	28 N	RAN	GE 51 E
		_		•	<b>~</b>		^ ^	•
FIE		ATE ME				umbu		-
	THE FOLLOWING INFORMATION WAS	FURNISHE	NEM DEST	WEIGHT	SIZE	FROM	το	MAX. ALLOW P.S.I.
NAI	E	-	1 0520		<b>5</b>		-	1004
	MATION . CKNESSTOTOTO	CASING	Used	15.5	54	0_	5700	£\$-49
PAC	KER: TYPE RTS SET AT 4852	LINER			ļ			
тот	AL DEPTHMUD WEIGHT	TUBING	used	4.5	27/8	0	4852	2500
BORE HOLE			OPEN HOLE					sнотя/рт.
INITIAL PROD: OILBPD, H2OBPD, GASMCF			PERFORATIONS			4870	4880	· Pagg
			PERFORATIONS					
ŗĸ:	SENT PROD: OIL BPD, H <sub>2</sub> O BPD, GAS MCF	PERFORATIONS						
PRE	VIOUS TREATMENT: A DATETYPE	н		MATERIA	 LS	<u></u>	· <del>!</del> -	
	ATMENT INSTRUCTIONS: TREAT THRU TUBING ANNULUS C	ASING   TU				ORSEPOWE	RORDERED	
	Spot men Displace into For	mation	At	PS1	net 7	A EXS	2 600	2500 #
_	Over Flush 1841							
	·							
_							······	
CU	TOMER OR HIS AGENT STATES THE WELL IS IN PROPER CONDIT	ION TO REC	EIVE THE	PRODUCTS,	SUPPLIES,	MATERIAL	S. AND SER	VICES
	THIS CONTRACT MUST BE S	SIGNED BEF	ORE WORK	IS COMMEN	ICED			
As c	ensideration, the above-named Custamer agrees:							••
	To pay Halliburton in accord with the rotes and terms stated in Halliburton's cu							
(b)	Halliburton shall not be responsible for and Customer shall secure Halliburton against any liability for damage to property of Customer and of the well owner (if different from Customer); unless caused by the willful misconduct or gross negligence of Halliburton, this provision applying to but not limited to subsurface damage and surface damage arising from subsurface damage.							
(c)	Custamer shall be responsible for and secure Halliburtan against any linbility for reservoir lass or damage, or properly damage resulting from subsurface pressure, losing control of the well and/or a well blowout, unless such lass or damage is caused by the willful miscanduct or gross negligence of Halliburtan.							
(d)	) Customer shall be responsible for and secure Halliburton against any and all liability of whatsoever nature for damages as a result of a subsurface tresposs, at an action in the nature thereof, arising from a service operation performed by Halliburton hereunder.							
(o)	Customer shall be responsible far and secure Halliburton against any liability for injury to or death of persons, other than employees of Halliburton, or damage to property (including, but not limited to, injury to the well), or any damages whatsoever, irrespective of cause, growing out of or in any way connected with the use of radioactive motorial in the well hale, unless such damage shall be caused by the willful misconduct or grass negligence of Halliburton.							
(f)	Halliburton makes no guarantee of the effectiveness of the products, supplies or materials, nor of the results of any treatment or services.							
(g)	At Customer's expense, to recover any Halliburtan equipment, tools or instruments which are last or damaged in the well, and if recovery cannot be had, to pay Halliburtan for such equipment, tools or instruments unless such loss or damage is caused by the nagligence of Halliburtan.							
,h)	Halliburson warronts only sitle to the products, supplies and materials and that the same are free from defects in warkmanship and materials. There are no warranties, express or implied, of merchantability, fitness or otherwise which extend beyond those stated in the immediately preceding sentence. Halliburton limits its liability for breach of any warranty or for damages resulting from its negligence with respect to the use of such products, supplies or materials to the replacement of such products, supplies or materials on their return to Halliburton, or at Halliburton's option, to the allowance to Customer of credit for the cost of such products, supplies or materials.							
i)	Upon Customer's default in the payment of Customer's account 40 days after receipt of invoice, such account will be subject to interest after date of invoicing until paid. In the avent it becomes necessary to employ an attorney to enforce collection of such account, Customer agraes to pay all collection costs and attorney fees in the amount of the unpoid account.							

Holliburton shall not be bound by any changes or modifications in this contract, except where such change or modification is made in writing by a duly authorized executive afficer of Holliburton.

I. HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMER'S AGENT.

11-20-69

"We'certify that the Foir Labor Standards Act of 1938, as amended, has been complied with "in the production of goods and/or with respect to services furnished under this contract.

TIME 0700 A.M. P.M.

TOTAL WEIGHT LOADED

TAX REFERENCE

PAGE 1 OF\_

TON

SUB TOTAL

TAX

TAX

CUSTOMER

WAS JOB SATISFACTORILY COMPLETED?\_

HALLIBURTON OPERATOR

Customer or His Agent

OPERATION OF EQUIPMENT SAMSFACTORYS

IELD	E. Poplar	SEC.	- 1		RNG			Montana
	MATERIALS USED							JOB COMPLETED
	MCA	0.2	000	DA	TE 11-20	- 69 DATE	11-20-63 DATE	1055 TIME
							ND EQUIPMEN	
AT. FLUID	DENSITY LB/GAL-API						UNIT NO. & TYPE	
	SIZE LB.	T.C.		c E	nties			Glandiva
		T	ah	ns	on		9184 TIO	Monten
	MCA GAL 500 % 15%	4		.,, 4				Glendire
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0752		40			400	0		
	Prossura Ret. Bridge Plus		1		1500	0		
0005	Wast An San Sold				1500	0	1	
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0908	Breek Circulation	2.4		0		0	4 Bb1 4	IND ME
		_	_	_	200	0		15% MSA
09/3		5.0		0	200	100		
0820	Acid To End of Tool	0,5	1	0	1400	600	-	
15 60	Six Packir		-	-				
0922			-					
0925		,25	_		2500	600	-	
0929	50 Gol MCA in Formation	.25	1	0	2000	300		
	SORK MCA on Perts							
0935	Pressure Casing To 1000		0	1		1000		
09+0	Start Displacing Acid	,25	1	0	2500	1000		
09 50	160 GEI MCA IN FORMATION	.3		0	1600	.000		
0950	250 * " " "	1.5	1		1500	900		
0959	500 " " "	1.5	1		1475	900		
0955	1 Bbl Over Flush in	1.5	_	0	1475	900		
			4					

(н	HALLIBURTON						то .	INVOICE & TICKET			
FORM 1908 A DIVIBIO	N OF HALLIBURTON COM	PANY	•	. DUN		RAWER . KLAHOMA 7	, 1 <b>35</b> 33	NO. 740	122		
٠ ,	CUSTOMER ORDER NO.	WELL N	O. AND FARM				COUNTY		STATE		
SERVICES FROM	CODE	SALES F	+ - A	Huber Icone	BUI	LK MATERIALS	FROM CO	OE DEL	MONTA	<u>n3</u>	
Glendin M	JON + SMA 5553	٥			<b>\</b>						
			CID VOL. 30 DAYS				1	TRACTOR			
Content Ollwell	Development E	D, D.	NG ADDRESS	761	dmu	us Cr	TY AND STATE	rother Oil	field S	Cruice	
DUNCAN USE ONLY	Core.	2.	<sub>20</sub> ር.გ.	CUS	T. INV.	S  EXEMPT FLUID Must be signed true. Either dil	Cosh distance Tox adjusting STATEMENT CONTY il process license produced from some ile sed in an unaltered con	COLUT	IG MONTH, IN- 4 DATE OF IN aid by due de aducted if disc conditions set forth being treated	voice. ate. ounted.	
TYPE AND PURPOSE O	F 108				COPIES	- CADAIT - GA	··				
	Toul fi	1 Acidle	ing and	gusp -	725×	×					
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PRICE REF.	SECONDARY REF. OR PART NO.		DESCRIPTION	. <u>-</u> -	,	I UNITS	2 UNITS_	PRICE			
R109-017		RT.TS.	PECKER		485	2150		355.00	355	00	
R109-108		Rddit	onal HRS	\$ .		4 hrs.		11.50	46	٥٥	
R113- GOS		Retrie	ring che	45.4			1	4 2.00	92	00	
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		SERVICE CHARG	TOTAL	LOADED		CU. FT.				<u> </u>	
	<u> </u>	<u> </u>	WEIGHT	MILES	<u> </u>	MILES	i	D TOTAL			
T.C. Ok Erit	FE BURTON OPERATOR		<u>TA</u>	X REFERÊNCE	•	-	50	B TOTAL			
WAS JOB SATISFACTORI	LY COMPLETED!							TAX			
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		JOB		DIVISION _	Noch	11 1	11				
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CUSTOME	Ŗ OR CUSTO	MER'S A	GENT (PL	EASE PRI	vr) :	CUST	MER OR CUS	том	ERS'AGENT (S	SIGNATURE)		HALLIBUR	TON OPE	RATORÆN	IGINEER		EMP				APPRO	VAL			
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JOB LOG FORM 2013 R-4 CUSTOMER WELL NO. JOB TYPE PRESSURE(PSI)
TUBING CASING 060 PUMPS T C DESCRIPTION OF OPERATION AND MATERIALS CDT 18.5 450 12/5

CUSTOMER



**TICKET CONTINUATION** 

**CUSTOMER COPY** 

766403 No.

CONTINUATION TOTAL

HALLIBÜR	RTON ENERGY SERVICES				CUSTOMER		WELL			DATE		PAGE OF	
FORM 1911 R-10					Murphy 011 C	OMPANY	Huber		4	Aug-18-	95		<u>2</u>
, PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	LOC	CCOUNTI ACCT	NG DF	DESCRIPTIO		QTY.	U/M	QTY. J U/M	UNIT PRICE		AMOUN	r <u></u>
504-043	\$16.00270				Premium Cement		100	ax.	i	9	50	950	00
	890.50077			_	HR-5 mixed 0.17 w/	50 ex	5	1b_	!	2	95	14	1 <b>7.5</b> _
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500-207						LI OADER MILES	TON MILES		100		35	135	00
500-306					MILEAGE TOTAL WEIGHT 9,405	LOADED MILES	TON MILES	423	.23		95	402	07

N 1		WIRELINE, INC		<i>.</i> "			
Operator Descipation	1	DIOACTIVITY LOGGI			Contract	No	5927
		PERFORATING		<i>:</i>		14.	0021
	Charge to Antonia	45 61	:2		Invoice No	o	
Igman Africa	Address	1 Tolenta	9 1/10	<u> </u>	Date		
•	city	J. B. J. C. T. C.	وي و ج		Order No.		
	(or well no.)				Suibbeg		·- · · · · · · · · · · · · · · · · · ·
egal Jescription	Address (or field)	Cou			District	<u> </u>	
•	VIA	Stato	11/1017:00		Operating Base	<u> </u>	
herein set forth, the under The undersigned, herei Should the amount due be attorney for collection, the The customer certifies performance of said work Because of the hazard and that you are not to be The customer agrees the service.	In consideration of the furnishing of yorsigned agrees as follows: to-wit: nafter referred to as the customer, agree not paid within the term fixed by the intermediate of the well on which and that all depth measurements shall is existing in the performance of the works held liable for injury to persons or proreimburse you for the reasonable value he foregoing constitutes the entire agree	is to pay you the amovoice, interest at six pees of twenty per cen ich the work is to be made under his su cordered, the custom operly arising in the e of any of your insti	pervision. ler agrees that performance or ruments, tools	t you do not g of said service, or equipment i	guarantee the r lost or damaged	s at your	our services,
To Be Paid By	(print correct name)	Ву	(signature	of customer o	r authorized re	neasantativa	
	DESCRIPTION		PRICE	AMOUNT	TOTAL	A/C	COST
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	VIA	F1.75		State 🕰					Base.	111	1131	<u> </u>	
TO WIRELINE, INC. horein set forth, the u The undersigned, h Should the amount due attorney for collection, The customer certi performance of sald w. Because of the haz, end that you are not t The customer agrees customer agrees	oreinafter referred be not paid within the undersigned a fics that he is the ore state of the ards existing in the obaries of the es to reimburse yo at the foregoing co	to as the custon the term fixed agrees to pay at a commer of the wastreme or performance or injury to part of the reason of the reason or the reason of the reason or the	mer, agrees to p. by the invoice, terney's fees of ell on which the nts shall be mad f the work order tons or property nable value of a	ay you the amointerest at six	unt of your or or of the state	from to invoice that a. that ance to tools	blished place amount sald we be a sald we be said said so or equip	orices for of invoit or the list in not guervice.	varantee t st.or.dama	he results o			ice. vith the
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## WELL EQUIPMENT INVENTORY

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	Hake	Type, Size and/or Description	Number or Feet	Valu
Equipment	D@	D-160 Serial # 188-1		1
Pumping Unit Electric Motor or Engine	Toshiba	40 EF 8 phase, 440T, Type 11KK 3647 frame, Serial # E-10033-19		2
Electrical Control(a)	OE	40 RP with time clock re-starter		<
Tubing Head	Larkin			<
Casing Head	Bector			10
Tubing		9-7/8° EUE 9rd	55781	D
Rods	USI . 887	50 - 7/5°, 150 - 2/6°	5500	
Casing		8-1/3° 15.4° 3-88	5760	D
flow Line(b)		2 Tubine .	4001	2
Treater		(See Baber #1 Sheet)		
Heater				
Separator				
tank (c)		(See Buber #1 Sheet)	<u> </u>	
Pecker	. 1	Neiter Loo-Set S-1/3P	<u> </u>	1
Sucker Rod Pump	Axelson	2.5" x 2" InserT		B
			.	
<u>.</u>		·		
Meters(d)		·		7
Electrical System(e)	TEA .			
		<u> </u>		
Buildings and Miscellan	ACUS. The N	Ther (1 Short)		
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₹* «		7. 71 A . Richard		
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<ul><li>(b) Including</li><li>(c) Including</li><li>(d) Gas or oil</li><li>(e) If company</li><li>distributi</li></ul>	length, size a size, thickness owned, includon system.	es, come or flat bottomed, plain or galv de transformers and equipment for electr		
Lease & Well No.:	Der Me Hu	hen 4A State: Yesten	<del></del>	
Field: Met M	på ner	County: Booseval	.1	

PRODUCTION & INJECTION DATA

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